RAILWAY AGE

THE STANDARD RAILROAD WEEKLY FOR ALMOST A CENTURY

FREIGHT TRAFFIC ISSUE

5 11 16 50

SEPTEMBER 2, 1950

SEP 7 1998

YOUNGSTOWN

Drop Bottom Container

FOR EFFICIENT HANDLING OF BULK MATERIALS . . .

YOUNGSTOWN STEEL DOOR COMPANY

Camel Sales Company
Cleveland Chicago

Camel Company Limited
New York Youngstown

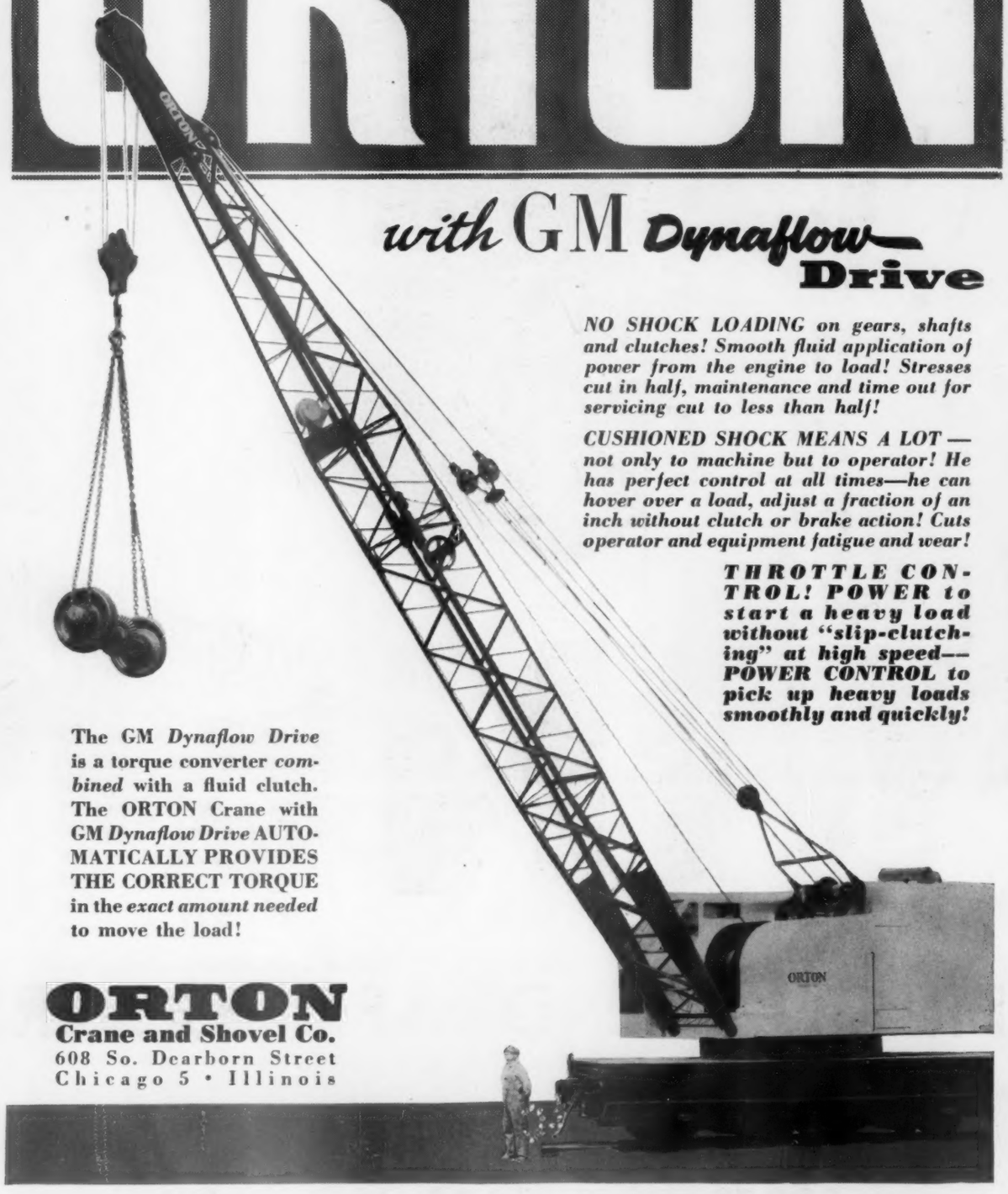
ORTON

with GM *Dynaflow* Drive

NO SHOCK LOADING on gears, shafts and clutches! Smooth fluid application of power from the engine to load! Stresses cut in half, maintenance and time out for servicing cut to less than half!

CUSHIONED SHOCK MEANS A LOT — not only to machine but to operator! He has perfect control at all times—he can hover over a load, adjust a fraction of an inch without clutch or brake action! Cuts operator and equipment fatigue and wear!

THROTTLE CONTROL! POWER to start a heavy load without "slip-clutching" at high speed— POWER CONTROL to pick up heavy loads smoothly and quickly!



The GM *Dynaflow Drive* is a torque converter *combined* with a fluid clutch. The ORTON Crane with GM *Dynaflow Drive* AUTOMATICALLY PROVIDES THE CORRECT TORQUE in the *exact amount needed* to move the load!

ORTON
Crane and Shovel Co.
608 So. Dearborn Street
Chicago 5 • Illinois

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CERTIFIED BY THE ASSOCIATION OF AMERICAN RAILROADS

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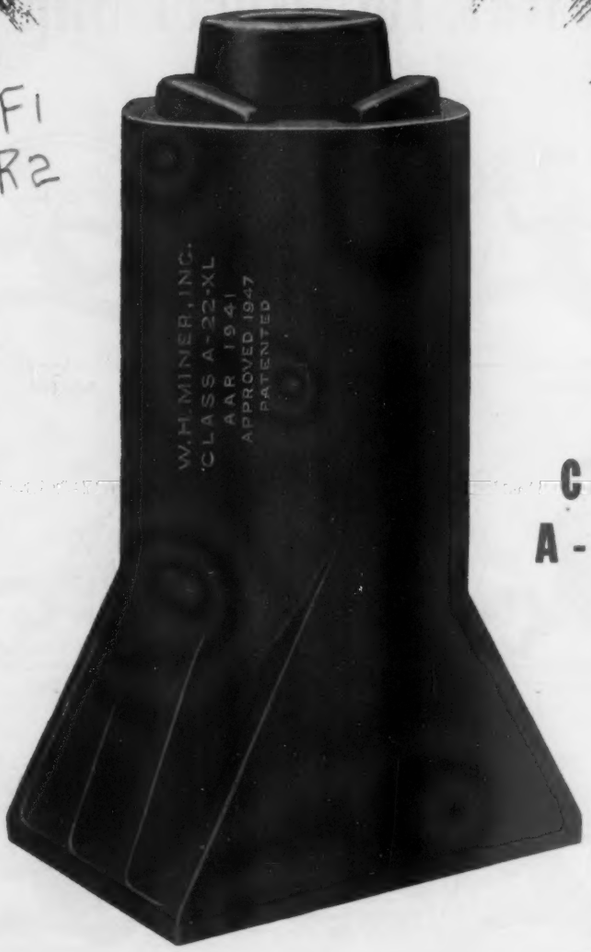


CLASS
A-22-X

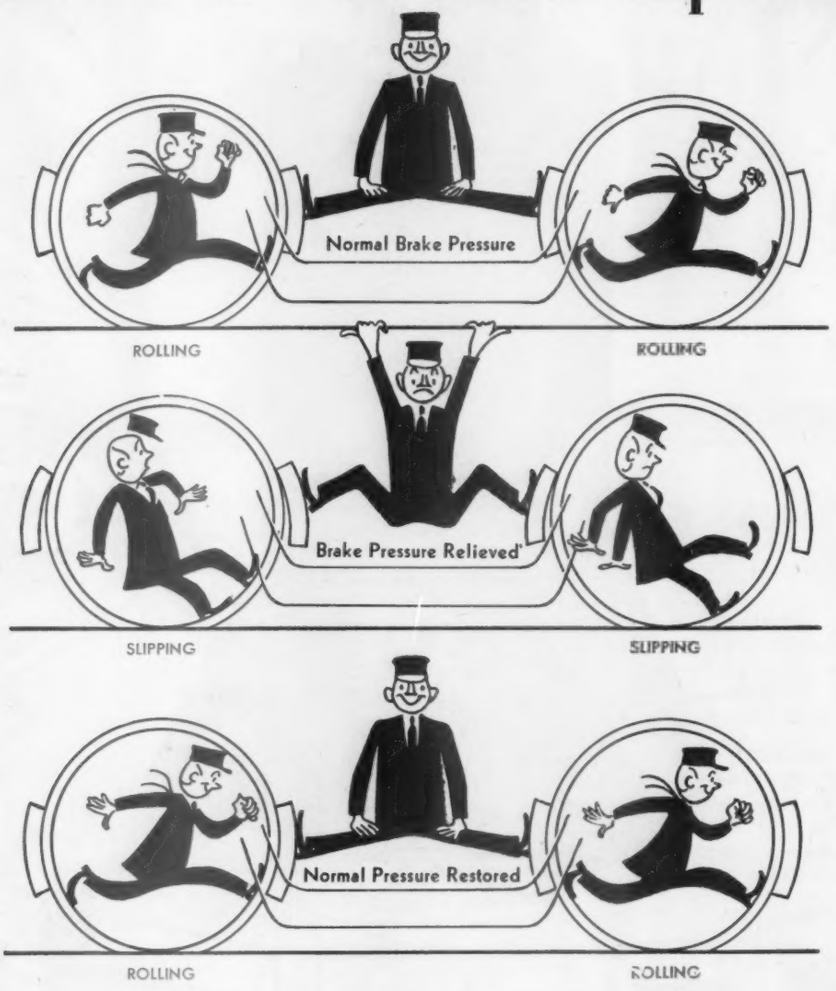
MINER

FRICTION DRAFT GEARS

MILLIONS IN DAILY USE
PROTECTING CARS AND LADING

W. H. MINER, INC., CHICAGO

"AP" Decelostat for Wheel Slip Detection



Westinghouse AP Mechanical-Pneumatic DECELOSTAT

As every railroad man knows—the aim in braking is to maintain *maximum* retardation under *all* rail conditions. That's where the Westinghouse AP Mechanical-Pneumatic Decelostat comes in.

At the first hint of wheel slip, this device momentarily relieves braking pressure, permitting wheels to regain train speed. Braking pressure is restored immediately to train level.

The Westinghouse AP Decelostat is of simple, positive mechanical-pneumatic design. All equipment is on the truck. No additional connections are required to car body, thus providing free interchange of trucks with complete wheel slip protection regardless of truck assignment.

Bulletin DL2461-1 gives the whole story. Ask for a copy.

Westinghouse Air Brake Co.

WILMERDING, PA

Vol. 129, No. 10 September 2, 1950

RAILWAY AGE

With which are incorporated the Railway Review, the Railroad Gazette, and the Railway-Age Gazette. Name Registered in U. S. Patent Office and Trade Mark Office in Canada.

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IN THIS ISSUE

EDITORIAL COMMENT

Victory for the Unions, by Consent of Congress 43

Other Industries a Source of Ideas 44

The Mechanical Association Meetings 45

FREIGHT TRAFFIC SECTION

Transporting Everglades Cane 47

Western Pacific Fulfills "Operation Nosebag" 50

"Service Stations" for Smaller Terminals, by Walter L. Turner, Jr. 52

Diesel Locomotive Fuel from Shale Oil, by W. L. Cotton 56

Better Switching Campaign Gets Down to Grass Roots 61

The Baldwin-Westinghouse Standard Line 63

GENERAL ARTICLE

Railroads Under Government Operation 71

DEPARTMENTS

New Book 62

General News 74

Railway Officers 98

Current Publications 106

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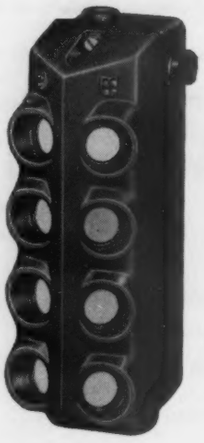
CAB SIGNAL EQUIPMENT

for Diesel Installations

To meet the growing need for equipment that is especially adaptable for use with Diesel locomotives, "Union" furnishes a new streamlined cab signal and a vertical equipment box for the 4-indication Type E Cab Signal System.

1. ***Vertical Equipment Box*** . . . Correctly proportioned to utilize efficiently the available space in Diesel locomotives. Retains the features of the horizontal equipment box used with the Type E Cab Signal System, including rack mounting of instruments, with the rack suspended by shear-type bonded rubber mountings to absorb the maximum amount of vibration. Units are plug-in for maximum convenience in maintenance and inspection.



2. ***Streamlined Cab Signal*** . . . Specially designed for mounting on the windshield center post of Diesel locomotives. Visors are cast in the cover in streamlined fashion. Correctly proportioned, they effectively shade the roundels . . . make it possible to obtain clear, unmistakable indications in bright daylight from any position in the cab. By means of a built-in dimmer control, the engineman can reduce the intensity of the clear indication as desired.

Our engineers stand ready to help you plan a cab signal system that is best suited to your particular needs. Just call or write our nearest district office.

UNION SWITCH & SIGNAL COMPANY

SWISSVALE PENNSYLVANIA

NEW YORK CHICAGO ST. LOUIS SAN FRANCISCO

WEEK AT A GLANCE

GOVERNMENT OPERATION: Technically, as this issue of *Railway Age* goes to press, the railroads are being operated by the government—having been "seized," as everyone knows, to avert the nationwide strike of conductors and trainmen which had been called for last Monday morning in direct contradiction of last week's positive "no-strike" assurances. Just what the brothers will get in the way of higher wages, shorter hours or working rules changes as the outcome of continued negotiations remains, of course, to be seen. But their roundabout maneuverings; their broken promises, and their threatened use of the strike weapon in the face of a grave national emergency have already produced a veritable deluge of unfavorable editorial comment in some of the country's most widely read newspapers. Some of this comment is quoted on page 73, while the facts of the situation are recorded in the article which begins on page 71. Meantime, it is pertinent to point out once more, as was done on this page last week, that the actual strike call was based only on the comparatively minor differences between the unions' extreme demands and the very substantial concessions to which the railroads had already agreed.

VICTORY BY CONSENT OF CONGRESS: Our own editorial comment on the events of the past week-end (page 43) is to the effect that the union "victory" in forcing government seizure of the railroads is primarily the fault of Congress—which has long been so subservient to labor that it has failed to plug up the holes in the Railway Labor Act, but seems disposed to reward the anti-social behavior of the unions by granting them further favors, e.g., by legalizing the closed shop and the check-off. But the unions can hardly have won many friends or influenced many people in their behalf by their latest demonstration of selfishness. Eventually, perhaps, even Congress will realize that it is better politics to serve the nation as a whole than to curry abject favor with minority pressure groups. And if that time ever comes—well, remember what happened to the professional prohibitionists?

NEWS HEADLINES: Canadian "non-op" strike ends as special session of Parliament gives quick passage to bill providing for eventual compulsory arbitration if needed.—I.C.C. bureau analyzes 1949 accident figures.—Emergency board ends Pullman-O.R.C. hearings.—Rail exhibit becomes proposed classification in 28310 case.— Programs for Coordinated Mechanical Associations meetings.—R.B.A. elects R. M. Beckley, Jr., as new secretary to succeed F. H. Kolb.—G. N. may buy Pacific Coast.

NOTHING TO WORRY ABOUT: "You can stop worrying about where the fuel is coming from for Diesel-electric locomotives." That is the heartening conclusion of the illustrated feature article beginning on page 56, in which W. L. Cotton reviews the possibilities of developing Diesel locomotive fuel from oil shale. The descending cost of producing synthetic fuel from shale has not quite met the ascending cost of producing it from natural petroleum, "but the gap is decreasing, with indications that the time is not so far off when the two will meet." A few slight changes—or a war—could close that gap, and open up to general use comfortably enormous oil-shale resources. Mr. Cotton's discussion, and the detailed cost data which it includes, are based on operations of the experimental oil-shale plant of the U.S. Bureau of Mines near Rifle, Colo.

BUT FREIGHT CARS ARE WORRYING A LOT OF PEOPLE: As the number of orders reported in the News columns shows, railroads all over the country are undertaking to make good their pledge to increase the freight-car fleet. And as another News story reports, there seems now to be good prospect that steel with which to build those new cars and to repair others will be made available. But such cars are long-range solutions for prevailing car shortages which, last week, averaged close to 40,000 a day. The immediate situation, says I.C.C. Chairman Johnson, is "hopeless." He made that statement while testifying before a House committee on another long-range proposal which is also reviewed in the News pages—Congressman Ellsworth's bill to have the government buy a reserve supply of some 50,000 cars. This doesn't apply to Col. Johnson, but a lot of the shippers and Congressmen who are worrying so much right now about freight cars could have saved themselves a lot of gray hairs and sleepless nights if they had thought a little more in the past about the importance of letting the railroads earn enough money to maintain an adequate car supply. In the final analysis, the blame for any present car shortage must rest with those who, by actions and votes, have deprived the railroads of both the incentive and the wherewithal to buy and maintain cars.

BALDWIN-WESTINGHOUSE DIESELS: A complete line of eight Diesel-electric locomotives of five types, designed to meet a wide range of regular and special service requirements, is now being offered for railroad use by the Baldwin Locomotive Works, in conjunction with the Westinghouse Electric Corporation. The locomotives, which are designed for greater availability through improved access for maintenance; increased horsepower for traction, and increased tractive force ratings at continuous rating speeds, are both described and illustrated in the article which starts on page 63.

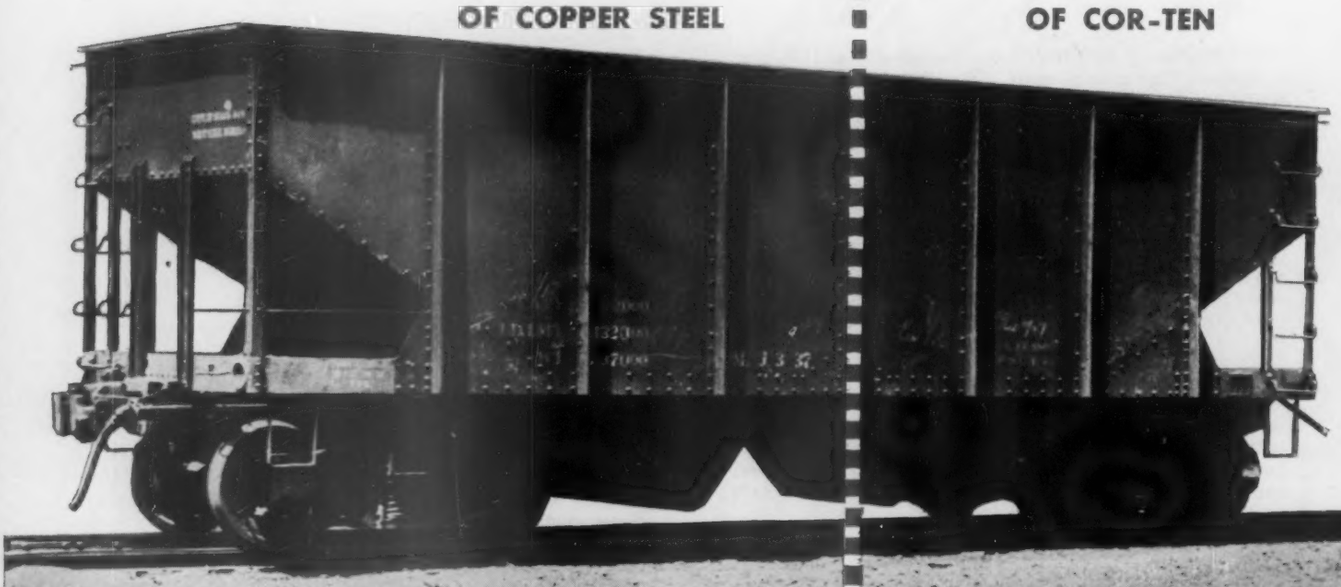
LOCOMOTIVE "SERVICE STATIONS": Despite the railroads' rapid and apparently accelerating conversion to Diesel power, it seems certain that a good many steam locomotives will continue in use for some years to come. And so, as this paper has frequently pointed out editorially, there is a good deal to be said for the idea of servicing and maintaining those necessary steam locomotives in the most efficient and economical manner. Good examples of modern facilities designed to do just that are the Norfolk & Western's locomotive "service stations" at Winston-Salem, N.C., and Pulaski, Va., which are described, with illustrations, by Walter L. Turner, Jr., on page 52.

Here's why U·S·S COR-TEN hoppers

. . . *last longer*

THIS HALF BUILT OF COPPER STEEL

THIS HALF BUILT OF COR-TEN



Taken just before dismantling, these pictures speak for themselves. The protective rust coat formed on the COR-TEN sheets is uniformly dense and firmly adherent. In contrast, the copper steel has voluminous patches of rusty scale which is more readily removed and therefore offers less protection to progressive corrosive action.

These photographs tell the story...

. . . require less maintenance!

Results of 13½ year service test show that U·S·S COR-TEN has almost twice as much resistance to deterioration as copper steel.

THIS test was made to find out exactly how U·S·S COR-TEN and structural copper steel compare in identical coal hauling service.

Before U·S·S COR-TEN was offered to the railroads, corrosion tests had indicated that under exposure to atmosphere, COR-TEN has 2 to 3 times the resistance of copper steel. Because it is an established fact that atmospheric corrosion is one of the main causes of deterioration in open-top freight car bodies, we had every reason to believe that COR-TEN in such equipment would out-wear copper steel. But we wanted definite proof.

So, in 1934, three 50-ton hopper cars were built with U·S·S COR-TEN sheets applied in half the car body and copper sheets in the other half.

All sheets were carefully cleaned, weighed individually, and measured for thickness along the edges before they were installed. All were identically painted. In 1945, after 11 years in coal hauling service, two of the cars were dismantled for thickness measurements—even though the COR-TEN sheets were still serviceable. After 13½ years of service, the third car was dismantled. Sheets were again cleaned, weighed and measured.

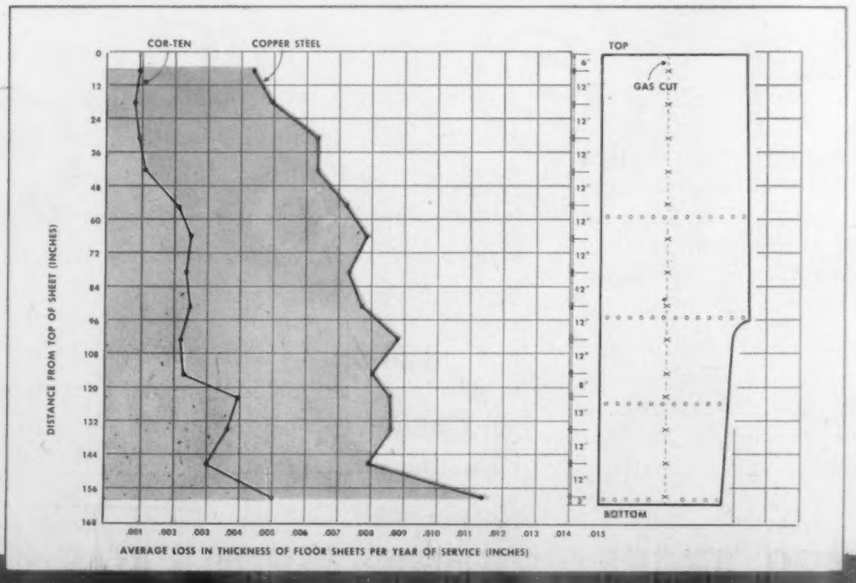
This test clearly demonstrated that on the average the copper steel sheets had lost almost twice as much weight and thickness as the COR-TEN sheets.

Representative of the comparative losses throughout the car structure is the chart below which diagrams the average losses in thickness per year of service in the floor sheets. Note that the average annual losses in thickness were much lower in the COR-TEN sheets. At the point where loss of thickness was greatest, as at all other points, COR-TEN lost less than half as much thickness as copper steel.

Here is positive evidence that in well-designed hopper cars in regular service, not subject to extraordinary mechanical abuse, U·S·S COR-TEN should last one and one-half to twice as long as copper steel of the same thickness.

Railroads which made some of the earliest applications of U·S·S COR-TEN in hopper cars have also recently taken measurements which verify the findings of this comparative-performance test. We welcome the opportunity to present the full details to you. We know you are concerned with the problem of improving the life of your equipment and of keeping your maintenance costs down. The story will interest you.

AMERICAN STEEL & WIRE COMPANY, CLEVELAND · CARNEGIE-ILLINOIS STEEL CORPORATION, PITTSBURGH
COLUMBIA STEEL COMPANY, SAN FRANCISCO · NATIONAL TUBE COMPANY, PITTSBURGH · TENNESSEE COAL, IRON & RAILROAD COMPANY, BIRMINGHAM
UNITED STATES STEEL SUPPLY COMPANY, WAREHOUSE DISTRIBUTORS, COAST-TO-COAST · UNITED STATES STEEL EXPORT COMPANY, NEW YORK

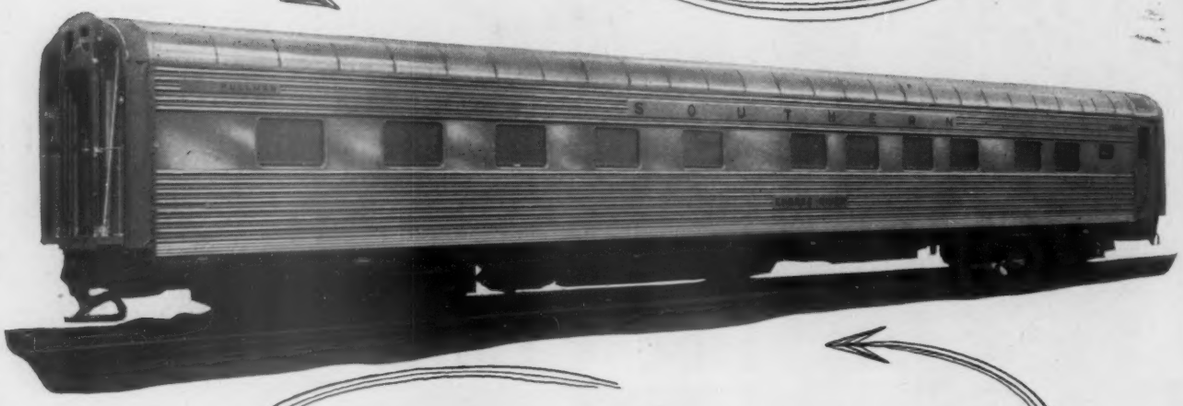


U·S·S HIGH STRENGTH STEELS

U·S·S COR-TEN · U·S·S MAN-TEN · U·S·S TRI-TEN

UNITED STATES STEEL

A beauty on the road...



a stranger in the shop

This stainless steel Pullman car of the Southern draws attention on the outside and rates passenger satisfaction inside. The distinctive, modern sheathing—as well as window frames, trim and hardware—make it the "handsomest thing on rails." And the durability of this rustless metal helps keep *operating* time on a 7-day basis. These Pullmans are strangers in the shop.

Lustrous Armco Stainless gives long life and economical service. It is easy to keep clean and sparkling by simple washing. It defies corrosion —whether in the yard, or bucking grit and soot slip streams at high speeds.

Because Armco Stainless is *solid* stainless and needs no protective finish or coating, it is the perfect steel for hard use. While it costs more initially than ordinary steels, it repays that cost many times over in maintenance-free service and by giving many extra years of life in hard use.

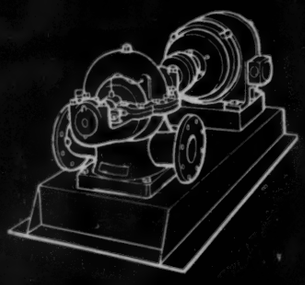
Armco Stainless is the preferred metal for modernizing, or making standard equipment more attractive. That's why so many railroads have it on their "schedules".

50th ANNIVERSARY SPECIAL PURPOSE STEELS

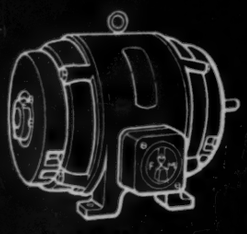
ARMCO STEEL CORPORATION

360 CURTIS STREET, MIDDLETOWN, OHIO, WITH PLANTS AND SALES OFFICES FROM COAST TO COAST • THE ARMCO INTERNATIONAL CORPORATION, WORLD-WIDE

ARMCO

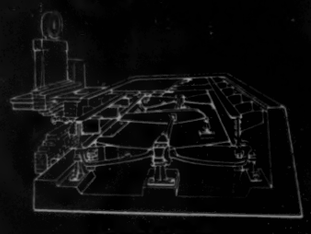


Centrifugal Pumps

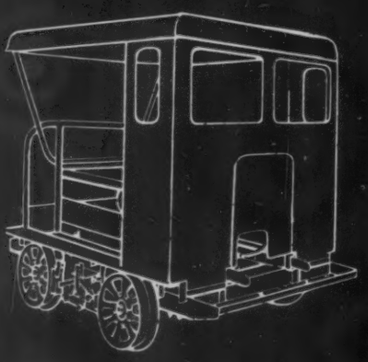


Electric Motors and Generators

Turbine Pumps



Truck Scales



Rail Cars

FOR RAILROAD EQUIPMENT

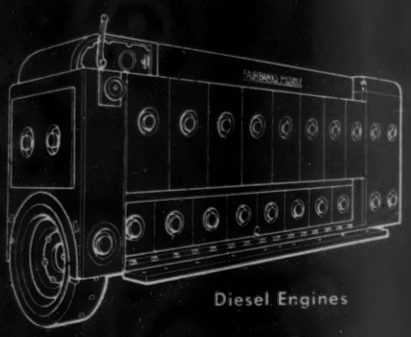
IT'S

FAIRBANKS-MORSE,

a name worth remembering

DIESEL LOCOMOTIVES AND ENGINES • ELECTRICAL MACHINERY • PUMPS • SCALES
HOME WATER SERVICE AND HEATING EQUIPMENT • RAIL CARS • FARM MACHINERY

Water, Coal and Sanding Stations

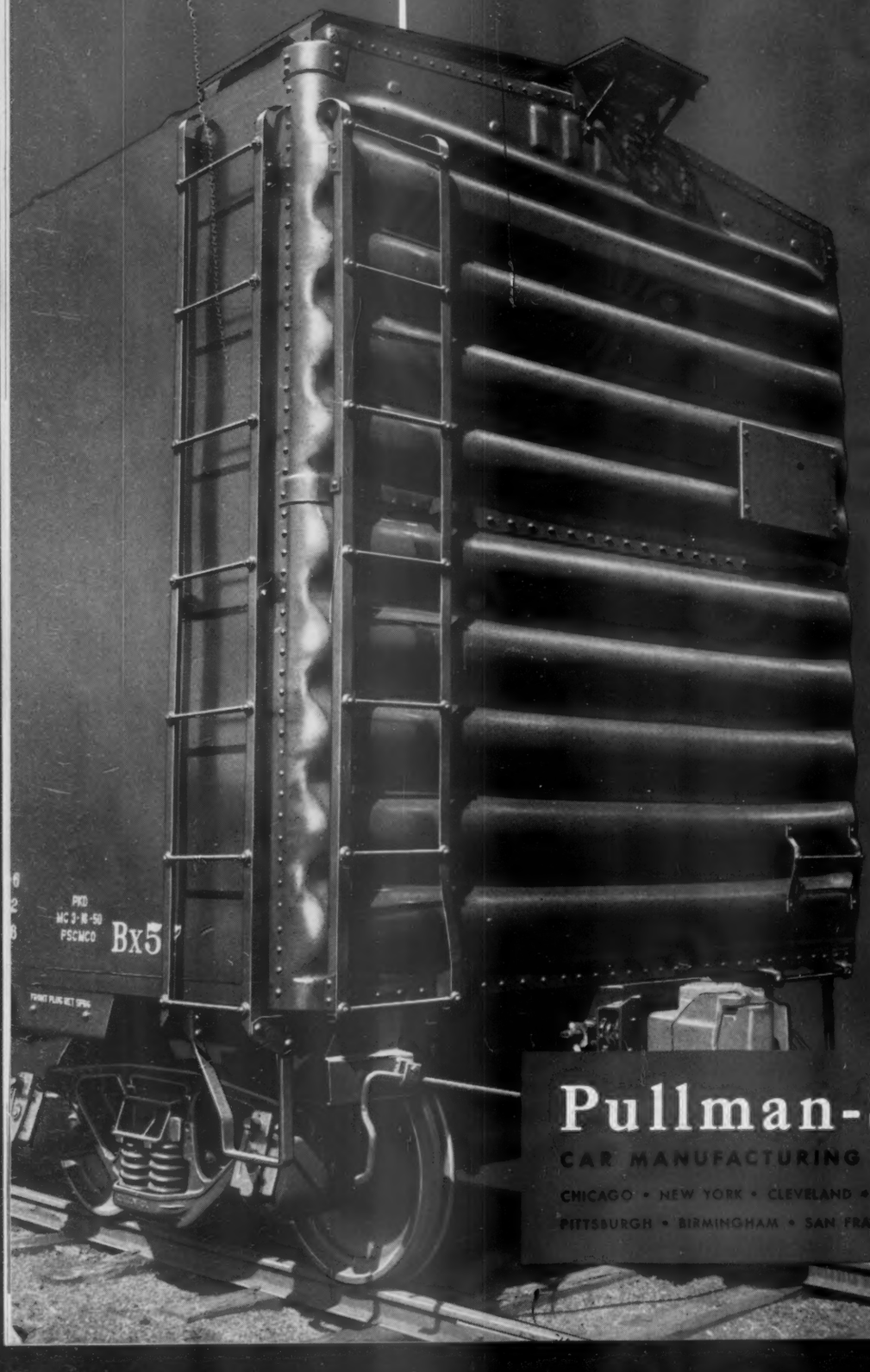


Diesel Engines

Track Scales

THE PS-1 END

Built to win the "E



Pullman-Standard

CAR MANUFACTURING COMPANY

CHICAGO • NEW YORK • CLEVELAND • WASHINGTON, D. C.
PITTSBURGH • BIRMINGHAM • SAN FRANCISCO

lard

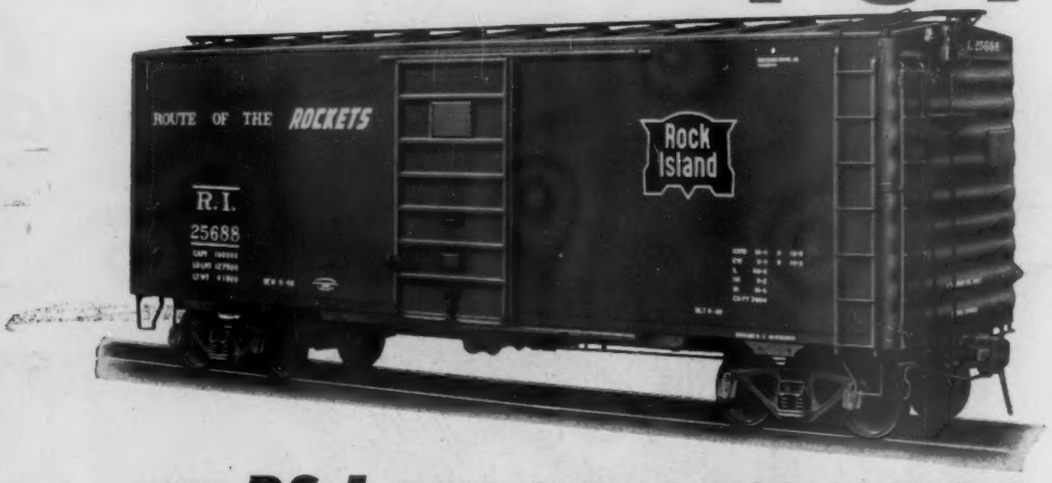
"BATTLE OF THE BULGE"

The PS-1 box car end is *engineered* to win that battle—and then *tested and retested* to make sure that the construction is right.

Thorough *static* tests search for possible weaknesses. Vicious and brutal *"hump"* tests show how the PS-1 end resists the impact of shifting loads, as revealed by exact "bulge" measurements and critical observation of structural performance. Superiority is never taken for granted.

The PS-1 box car is a tested car *all over.* As a result, dozens of improvements have been adopted since the first PS-1 was built. At Pullman-Standard, *standardization* is never allowed to bring *progress* to a standstill.

PS-1



THE PS-1 BOX CAR IS ECONOMICAL

In PS-1 freight car building, every effort is made to achieve economy through *continuous assembly-line production.*

Increased efficiency in manufacture makes sturdy, dependable, *modern* freight cars readily available at reasonable price. The PS-1 is a *quality* box car . . . *efficiently produced.*

More than 20,000 PS-1's, delivered since the introduction of this car only three years ago, are *road-proving* the value of this policy to the railroads of America.

Call 'em what you like.

ELECTRIC

DIESEL ELECTRIC

STEAM TURBINE ELECTRIC

GAS TURBINE ELECTRIC

YOU CAN BE **SURE**
IF IT'S Westinghouse

. . . the final drive's Electric

Diesel electric, steam turbine electric, gas turbine electric and conventional electric . . . all four depend upon *electric* transmission and are, in fact, electrified motive power.

And only electric transmission—regardless of the power source—has all of these seven operating benefits:

1. **Constant rail hp over normal operating range of the locomotive.**
2. **Multiplicity of lightly-loaded driving axles, with maximum locomotive weight used for adhesion.**
3. **Exceptionally high drawbar pull in both starting and running.**
4. **Decided increase in train tonnage.**
5. **Easier handling of heavier trains.**
6. **Marked reduction of helper service over ruling grades.**
7. **Electric braking on long, descending grades.**

These advantages of electrification apply to every type of service—switching, passenger or freight—and every type of locomotive utilizing electric transmission.

For more information on the ways you can utilize electrified motive power for your own profit, write, wire or phone your nearest Westinghouse office. Westinghouse Electric Corporation, P. O. Box 868, Pittsburgh 30, Pa.

J-95139

Westinghouse

PLANTS IN 25 CITIES . . . OFFICES EVERYWHERE

Partner in Railroad Progress

Luxury Cars by Pullman-Standard "Sleepy Hollow" Comfort by Heywood-Wakefield

In design, construction and appointments for pleasant, *comfortable* travel, these new cars reflect the long, practical experience of Pullman-Standard Manufacturing Company in building equipment for the railroads of America.

The Heywood-Wakefield "Sleepy Hollow" Seats were selected by all three railroads for these new coaches built for them by Pullman-Standard. It embodies *all* the basic features which have made the exclusive "Sleepy Hollow" design an accepted standard of comfort.

The coaches built for the Santa Fe "Kansas City Chief" create an atmosphere of spacious luxury.

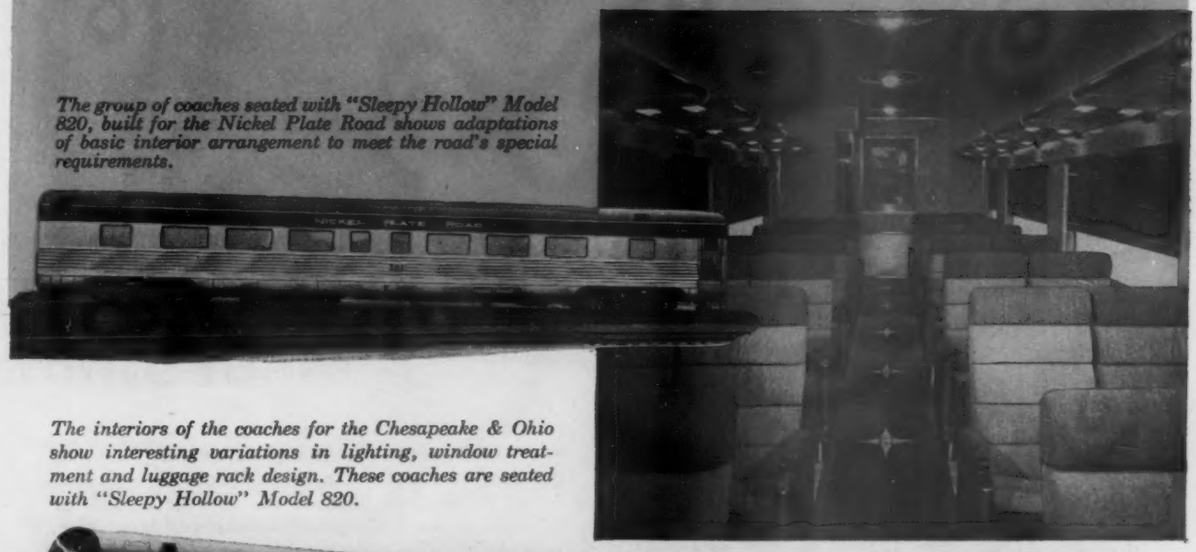
The "Sleepy Hollow" Legrest Seat No. 830 installed in the new Santa Fe coaches assures complete relaxation during the longest trip.

Three Great Railroads Add New Equipment with Modern Seating to Make Travel More Attractive for Their Patrons

Santa Fe

NICKEL PLATE ROAD

C AND O



The group of coaches seated with "Sleepy Hollow" Model 820, built for the Nickel Plate Road shows adaptations of basic interior arrangement to meet the road's special requirements.

The interiors of the coaches for the Chesapeake & Ohio show interesting variations in lighting, window treatment and luggage rack design. These coaches are seated with "Sleepy Hollow" Model 820.

HEYWOOD-WAKEFIELD

EST. 1826

REG. U. S. PAT. OFF.

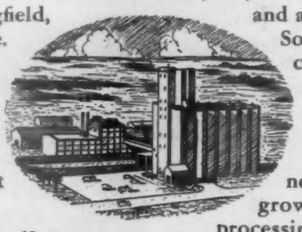
Transportation Seating Division

Gardner, Mass.

The Miraculous SOY BEAN and the M. & St. L.

The Minneapolis & St. Louis Railway again salutes the mighty Soy Bean industry, which in 1950 is playing a greater part than ever before in agricultural and industrial progress. The American Soybean Association, founded in 1920, is holding its 30th annual convention August 28-29-30 in Springfield, capital of America's No. 1 Soy Bean State.

As an important carrier of Soy Beans and the many products made from this modern "Miracle Crop," the M. & St. L. recognizes the contribution of Soy Beans to farm and business prosperity in the Great Midwest. This contribution is most striking in the four states served by



The Minneapolis & St. Louis Railway

In 1949, Illinois, Iowa, Minnesota and South Dakota harvested 5,194,000 acres of Soy Beans, half of the United States' total. They produced 124,165,000 bushels or 55 per cent of the country's crop of 222,305,000, second largest in history. Illinois harvested 82,602,000 bushels, the all-time record for any state; Iowa, 28,778,000 bushels; and Minnesota, 12,408,000. The 1950 acreage exceeds that of 1949 and an even bigger crop is forecast.

Soy Bean is called the "Miracle Crop" because of its manifold uses and the rapidity with which it has become a great and profitable factor in American farming.

The M. & St. L., specialist for 79 years in transportation for agriculture, networks some of the richest Soy Bean growing areas and directly serves five large processing plants. To Soy Bean producers and processors, the M. & St. L., a modern, Diesel-powered Railway, offers the same Fast Dependable Freight Service it has provided since 1871 for other products of agriculture and industry.

Diesel Locomotives now power all M. & St. L. Freight Trains

The Minneapolis & St. Louis Railway

Traffic Offices in 36 Key Cities

WITH

DOUBLE-ACTION

resistance to impact

Protecting lading, reducing fantastic lading-damage costs begins with the car . . . with the equipment employed to cushion the shocks of starting, stopping and coupling impacts. Today's high speed switching in hump yard and flat yard demands modern equipment . . . cushioning *especially designed* to provide lading protection. With Waughmat Twin Cushions, horizontal shocks are minimized and component vertical shocks halved because the Twin Cushion double action takes the bite out of impact. Always cushioning in pull or in buff, Twin Cushions have no solid point. Give lading a passenger car ride with Waughmat Twin Cushions. We welcome your inquiry.

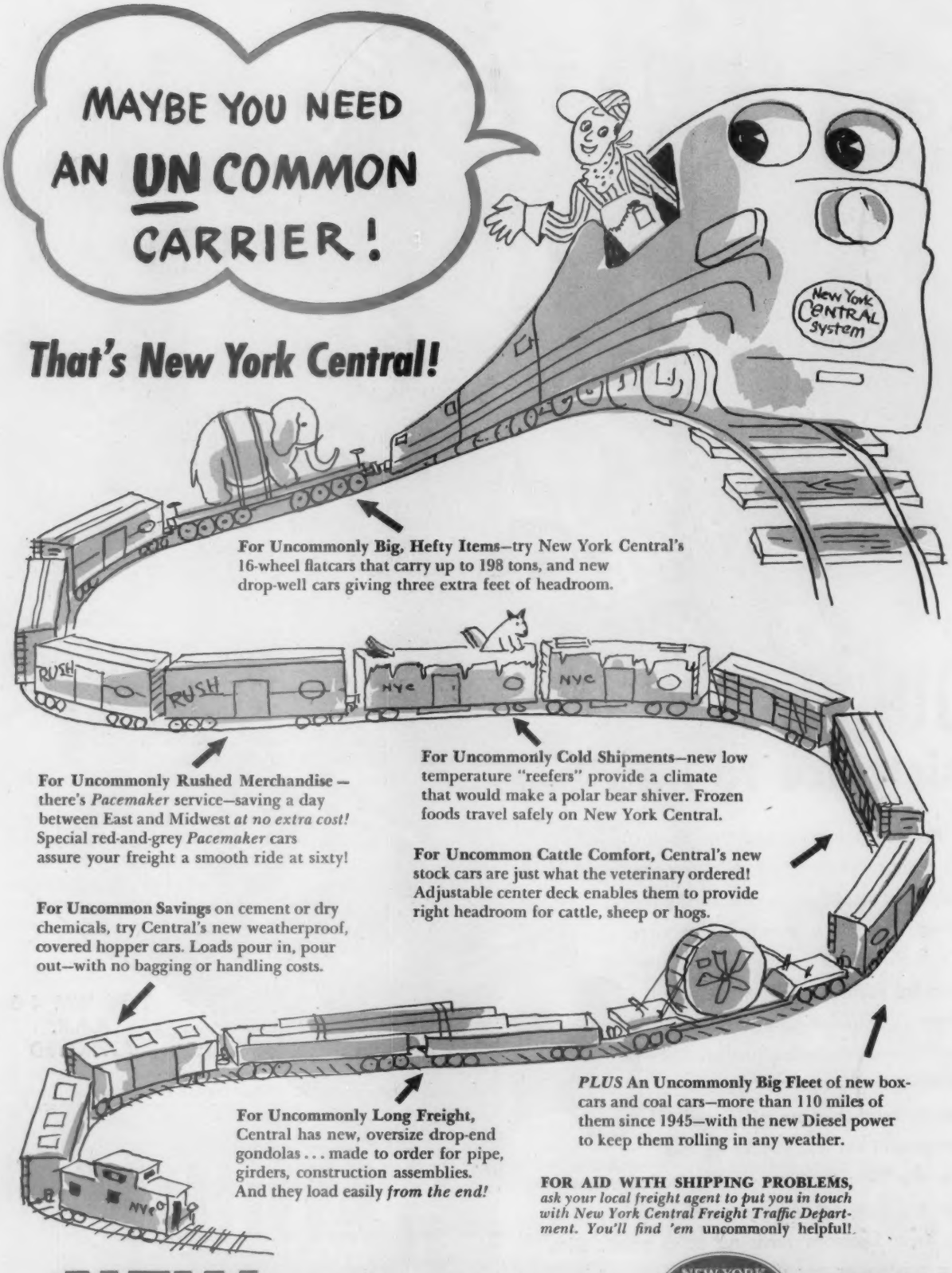
TYPE WM 4-6
A.A.R.
APPROVED

WAUGHMAT

Twin Cushions

TRADE MARK REGISTERED

WAUGH EQUIPMENT COMPANY
New York • Chicago • St. Louis • San Francisco
Canadian Waugh Equipment Company
Montreal



For Uncommonly Big, Hefty Items—try New York Central's 16-wheel flatcars that carry up to 198 tons, and new drop-well cars giving three extra feet of headroom.

For Uncommonly Rushed Merchandise—there's *Pacemaker* service—saving a day between East and Midwest *at no extra cost!* Special red-and-grey *Pacemaker* cars assure your freight a smooth ride at sixty!

For Uncommonly Cold Shipments—new low temperature "reefers" provide a climate that would make a polar bear shiver. Frozen foods travel safely on New York Central.

For Uncommon Cattle Comfort, Central's new stock cars are just what the veterinary ordered! Adjustable center deck enables them to provide right headroom for cattle, sheep or hogs.

For Uncommon Savings on cement or dry chemicals, try Central's new weatherproof, covered hopper cars. Loads pour in, pour out—with no bagging or handling costs.

For Uncommonly Long Freight, Central has new, oversize drop-end gondolas . . . made to order for pipe, girders, construction assemblies. And they load easily *from the end!*

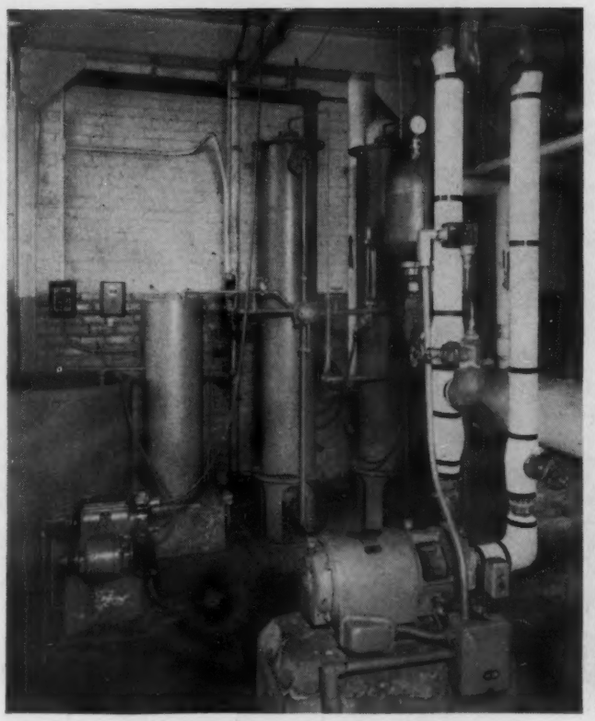
PLUS **An Uncommonly Big Fleet** of new box-cars and coal cars—more than 110 miles of them since 1945—with the new Diesel power to keep them rolling in any weather.

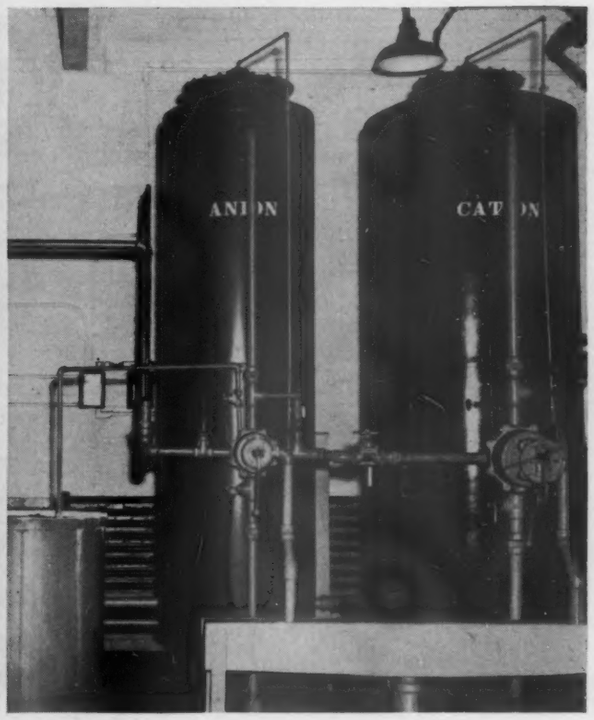
FOR AID WITH SHIPPING PROBLEMS, *ask your local freight agent to put you in touch with New York Central Freight Traffic Department. You'll find 'em* uncommonly helpful!

NEW YORK CENTRAL

The Smooth Water Level Route

NEW YORK CENTRAL SYSTEM





Low Cost MINERAL-FREE WATER WITH A DEARBORN DE-IONIZING SYSTEM

A Dearborn De-Ionizing system—built to the specific needs of your railroad—will provide all the mineral-free water you need . . . *and at less than 10% the cost of distilled water.*

This mineral-free water, when conditioned with Dearborn formula 517, will provide proper Diesel cooling to eliminate mechanical failure of liners, heads and blocks. This combination will protect cooling systems of engine-driven auxiliary generators and radiators of trucks, buses, scrapers, graders, caterpillars. Dearborn De-Ionizing systems will also produce mineral-free water for storage batteries and adequate supplies of scale-free, non-corrosive water for Diesel steam generators.

Investigate a Dearborn De-Ionizing system. The only information needed is: (1) analysis or sample of raw water supply; (2) quantity and quality of mineral-free water required; (3) available space for equipment; (4) raw water pressure and size of supply; (5) available power characteristics.

HAVE YOU REQUISITIONED YOUR DEARBORN CHROMOKIT?

It provides the only fast, simple, accurate and economical way to determine the chromate content of your Diesel cooling water. Only $7.50 each.

INFORMATION ON DE-IONIZING SYSTEMS

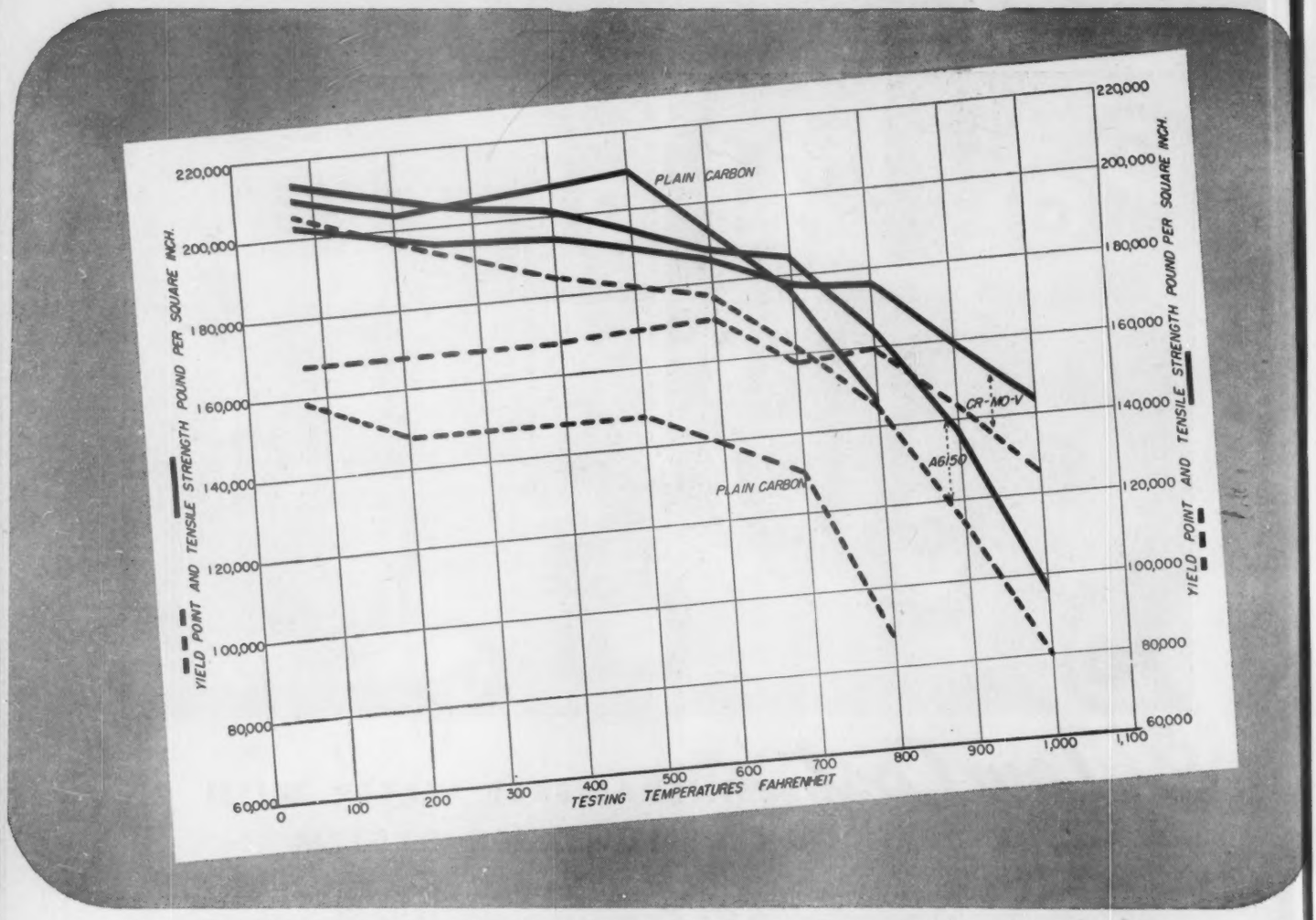
A copy of "Dearborn De-Ionizing Systems," containing valuable information about how to secure the mineral-free water you need, will be sent on request.

DEARBORN CHEMICAL COMPANY
310 S. Michigan Ave. • Chicago 4, Ill.

Dearborn
TRADE MARK REGISTERED
THE LEADER IN WATER TREATMENT AND RUST PREVENTIVES

Dearborn Chemical Company
Dept. RA, 310 S. Michigan Ave.
Chicago 4, Ill.
Gentlemen: ( ) Please send booklet "Dearborn De-Ionizing Systems."
( ) Have a Dearborn engineer call.

Name.....
Company.....
Address.....
City.....*State*.....



HIGH TEMPERATURE PROPERTIES

of Cr-V and Cr-Mo-V Spring Steels

SPRINGS FOR SERVICE at elevated temperatures require steels which resist softening and lowering of the yield point. Unless hardness and yield strength are stabilized by correct alloy additions to the steel, these properties deteriorate rapidly as the temperature is raised.

The chart above shows the yield point and tensile strength of three types of spring steel at elevated temperatures determined by standard short-time tension tests.

Springs of plain carbon steel are sometimes used at moderately elevated temperatures, although their lower yield values prevent them from giving service as satisfactory as that of the alloy spring steels.

Chromium-vanadium steel springs, such as AISI 6150, give better service at ordinary temperatures because of the higher yield point. In addition, they may be used at operating temperatures up to about 700° or 750° F because they retain high yield point values as the temperature is increased.

Chromium-molybdenum-vanadium steel was especially designed for springs operating at temperatures in excess of 750° F. It can be used for springs operating at temperatures as high as 850° F or even higher under some conditions. At 800° F, the yield point of this steel is still greater than that of plain carbon steel at room temperature.

If you have a problem in spring applications at elevated temperatures, our metallurgical engineers will be glad to help you solve it.

MAKERS OF ALLOYS — VANCORAM BRAND — CHEMICALS AND METALS

VANADIUM CORPORATION OF AMERICA

420 LEXINGTON AVENUE, NEW YORK 17, N. Y. • DETROIT • CHICAGO • CLEVELAND •

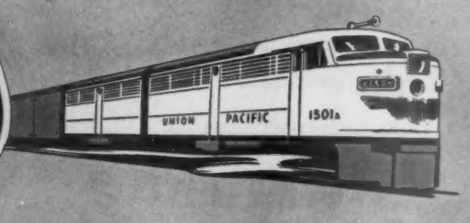
It's the use of the clubs that's important

Having a complete set of clubs is one thing. Knowing when and how to use them to best advantage is another. And that goes for railroading.

Union Pacific has the "clubs"; equipment, facilities and manpower. It also has the "know how" essential for the efficient handling of freight shipments.

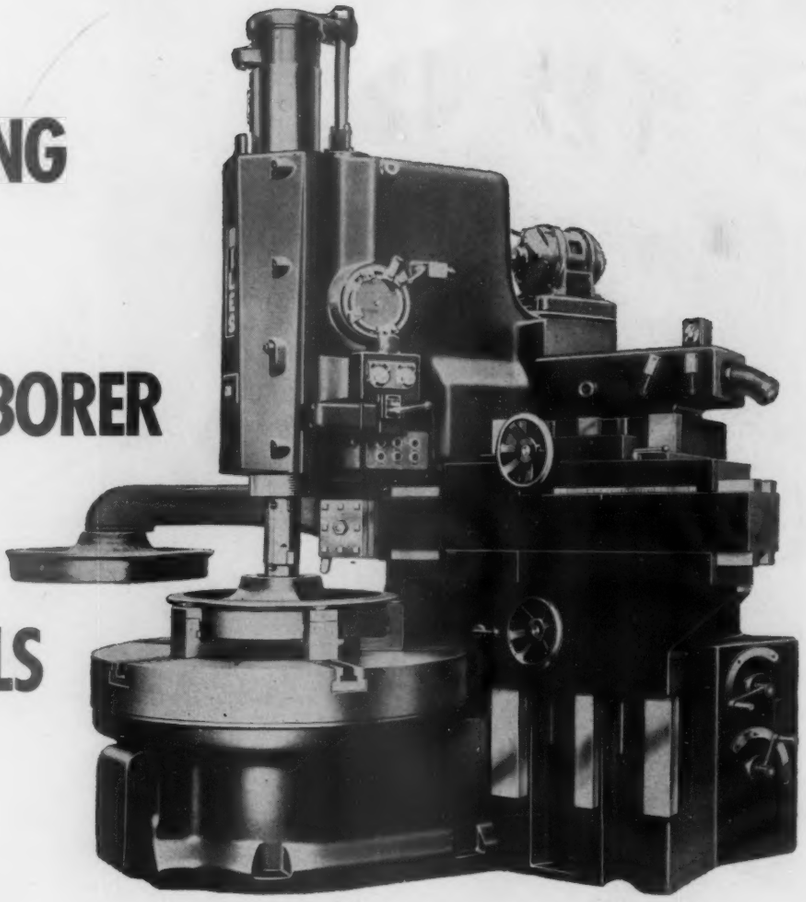
This is a statement we'd like to have you make us prove. The opportunity will be appreciated.

UNION PACIFIC RAILROAD



BE SPECIFIC: *Ship* UNION PACIFIC

ANNOUNCING A NILES HYDRAULIC BORER FOR DIESEL WHEELS



To meet one of today's important maintenance problems—diesel wheels and the 40-hour week—Lima-Hamilton has developed a new hydraulic wheel borer, especially designed to speed the handling of diesel locomotive wheels.

This new machine resembles, in most respects, the highly successful Niles automatic car-wheel borer. However, it incorporates a side head equipped with hydraulic feed and a four-position turret. This permits the use of roughing, finishing, and radius tools in facing hubs—also makes possible machining of hub shoulders and outer dimensions and, when desired for balancing, machining of the web and rim.

The first two Niles borers for diesel wheels will be delivered in the near future to the Readville, Massachusetts, shops of the New Haven Railroad.

This Niles Hydraulic Borer has a range of table speeds and feeds designed for carbide tools. After the desired speeds and feeds for roughing, finishing and chamfering the bore are selected, they are automatically engaged at the proper time during the cycle. The boring cycle itself is entirely automatic, from movement of starting lever to return traverse of the boring bar and application of table brake. The side head is operated manually but with hydraulic feed in both horizontal and vertical directions. Wheels are chucked and unchucked simply by pressing buttons.

Bore sizes: up to 12 inch diameters. Wheel sizes up to 44 inches with flange down, or up to 48 inches with flange up.

For full information, call the Lima-Hamilton sales office in New York, Chicago or other principal cities, or write directly to Lima-Hamilton Corporation, Hamilton, Ohio.

LIMA HAMILTON CORPORATION

NILES TOOL WORKS CO. **HAMILTON, OHIO**

A division of the Lima-Hamilton Corporation

Always working together to give you

FINER FREIGHT SERVICE

Management

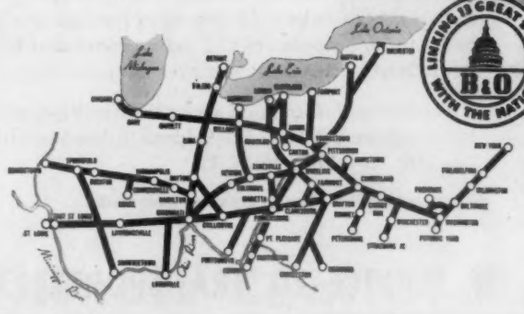
The men who direct the Baltimore & Ohio know that constant progress requires constant planning to give B&O shippers new and faster trains, better yards and facilities, and ever more dependable service.

Methods

Outstanding among B&O's modern methods is Sentinel Service, which assures *siding-to-siding* dependability in carload freight schedules. Another is the *Automatic Records* feature. Through it, shippers and receivers are notified at once of any interruption in a Sentinel car's schedule—and notified again of reforwarding.

Men

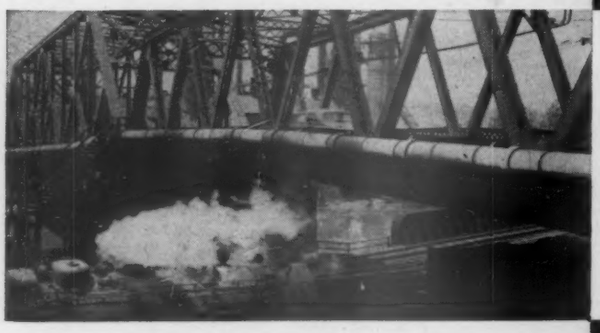
B&O representatives from coast to coast and from border to border have had practical training throughout the B&O system. They've *seen* the operations in yards, terminals, and offices; and can advise you on any shipping problem. So — wherever you are, *ask our man!*



BALTIMORE & OHIO RAILROAD

Constantly *doing things*—better!

Resists corrosion...



Withstands vibration...

Saves on installation...

...3 good reasons why TRANSITE PIPE cuts railroad water-line costs to the bone!

HERE'S WHY many of the country's leading railroads have invested in Transite* Pressure Pipe as the key to *long term* water-line economy:

Resists corrosive soils—Transite Pipe is made of asbestos and cement, steam-cured under pressure to give it exceptional corrosion-resistance. That's why this pipe stays strong, even when exposed to such highly corrosive soils as cinder fills, salt marshes and other acid or alkaline soil conditions.

Withstands traffic shocks, earth movements—Transite's Simplex Couplings make up tight, stay tight in service. And because these joints are flexible, they absorb the shock and vibration of train traffic, help compensate for soil movements and other stresses—providing a constant safeguard against leakage of water into adjacent soil and protecting against costly pipe failures.

Saves on installation, gives long service—Pipe-laying crews can lay more pipe per day with Transite because it is light in weight, easy to handle, and because the simple coupling method used speeds up assembly, saves time on the job. And these initial installation economies are followed by long-term economies in both operation and maintenance that help assure lower water-line costs over the years.

For further information about Transite Pipe, write for Brochure TR-11A. Just address Johns-Manville, Box 290, New York 16, N. Y.

*Transite is a Johns-Manville registered trade mark

JM PRODUCTS

Johns-Manville 92 YEARS OF SERVICE TO TRANSPORTATION

NEW FREIGHT CARS

14,431 in service—
1,100 more to come!

With the completion of its latest order for freight cars, the Illinois Central will have replaced or modernized more than 40 per cent of its freight equipment—all since the beginning of 1946.

This is a continuing program. For the Illinois Central is determined to be fit and ready to handle whatever tasks it may be asked to perform—for shippers and for all the people of America.

Illinois Central Railroad ***Main Line of Mid-America***

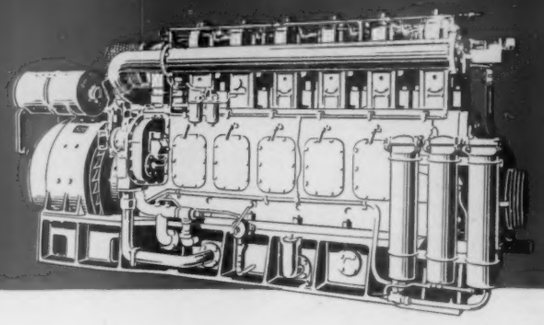
DESIGNED FOR THE JOB . . . RIGHT FOR THE JOB!

LOCOMOTIVE DIESELS

BY *Cooper-Bessemer*

300 TO 2000 HP

Featuring NEW economies in railroad power by one of America's OLDEST engine builders.



You'll find Cooper-Bessemers cutting costs for these and many other locomotive users:

Albany & Northern Ry. Co.
Ashley, Drew & Northern Ry.
Barre & Chelsea R. R. Co.
British Columbia Elec. Ry., Ltd.
Central California Traction
C & O — Marquette Division
Frankfort & Cincinnati R. R.
Georgia Northern Ry. Co.
Grafton & Upton R. R. Co.
Greenville & Northern Ry. Co.
High Pt., Thomasville & Denton
Jamestown, Westfield & N. W.
Kennecott Copper Company
Lakeside & Marblehead R. R.
Live Oak, Perry & Gulf R. R.
Louisville & Nashville R. R.
Mississippi Export R. R. Co.
M. K. T. R. R. Co.
Norfolk Southern Ry. Co.
Pacific Great Eastern Ry. Co.
Santa Maria Valley R. R. Co.
Saratoga & Schuylerville R. R.
St. Johnsbury & Lamoille Ct.
Tallulah Falls Ry. Co.
Southern Pacific R. R. Co.
Unadilla Valley Ry. Co.

Now 3 diesels do the work of 7 steamers — and cut costs 68%!

IN the words of George L. Fowler, president of the Frankfort & Cincinnati Railroad, "If it hadn't been for the money saved by our three 70-ton diesels, our road just couldn't operate."

In the case of this short-line road, a number of diesel economies and short cuts contribute to the 68% cut in operating costs. The three Cooper-Bessemer-powered G. E. 70-tonners are giving close to 98% availability. Maintenance cost has dropped from one-half to one-*fifth* of a cent per ton mile. Fuel costs run less than half! The steamers had to be fueled and watered daily at each terminus. The diesels are filled up only *once* in *three* days. Finally, the diesels have greatly simplified the job of maneuvering and switching, saving time and further cutting costs.

Here's further proof of the huge savings that can be gained by conversion to diesel-electric power. It's also mighty good evidence that with Cooper-Bessemer locomotive diesels — engines *designed* for railroading — you can count on exceptional efficiency and lowest of low maintenance.

Here shown operating in multiple are two of the three Cooper-Bessemer-powered G. E. 70-ton locomotives serving Frankfort & Cincinnati Railroad. Because it serves a number of well-known distilleries, in addition to other miscellaneous freight service, road is nicknamed "The Whiskey Railroad of the World."

George L. Fowler (seated), President of Frankfort & Cincinnati Railroad, and Joe R. Norris, Superintendent of Motive Power. Both are enthusiastic about the performance of their Cooper-Bessemer-powered units.

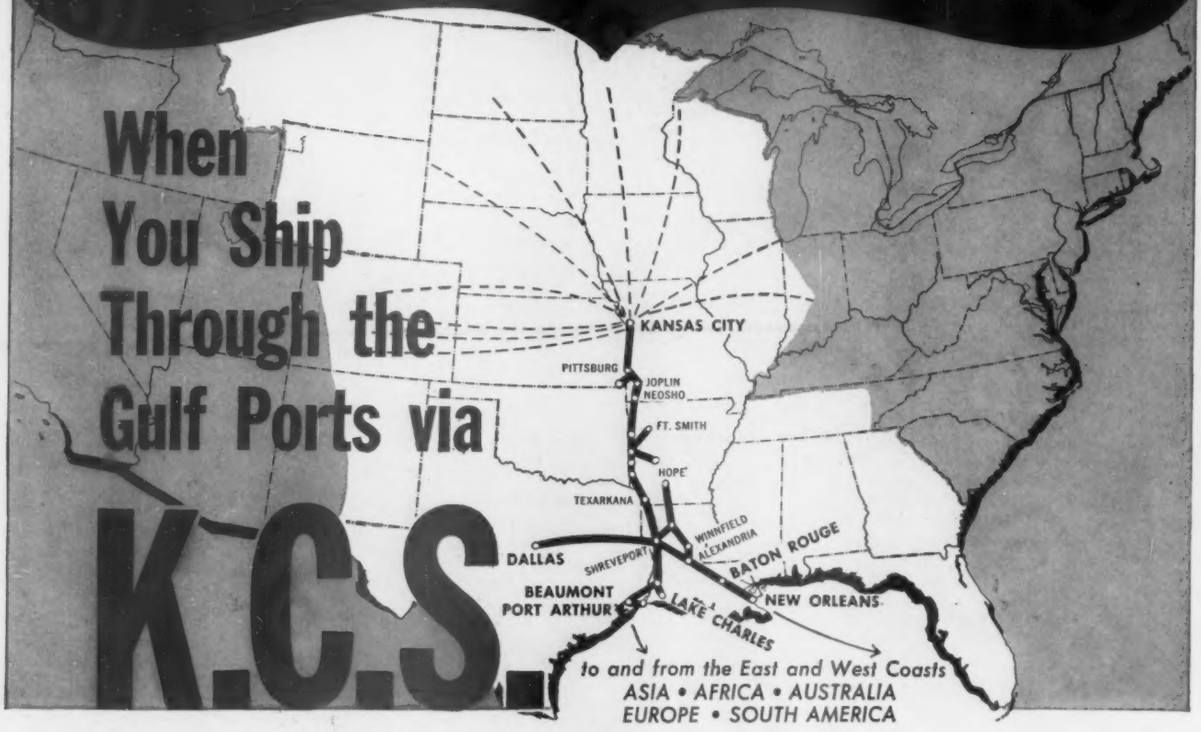
Another Example of Efficient Power at Lower Cost

Cooper-Bessemer railway engine warehouse and service branches: Gloucester, Houston, San Francisco, Seattle, St. Louis, Tulsa, Atlanta (General Electric). Cooper-Bessemer of Canada, Ltd., Halifax, N. S.

The **Cooper-Bessemer** *Corporation*

MOUNT VERNON, OHIO — GROVE CITY, PENNA.

MID-AMERICA'S "Third Coast" IS FIRST IN EFFICIENCY...

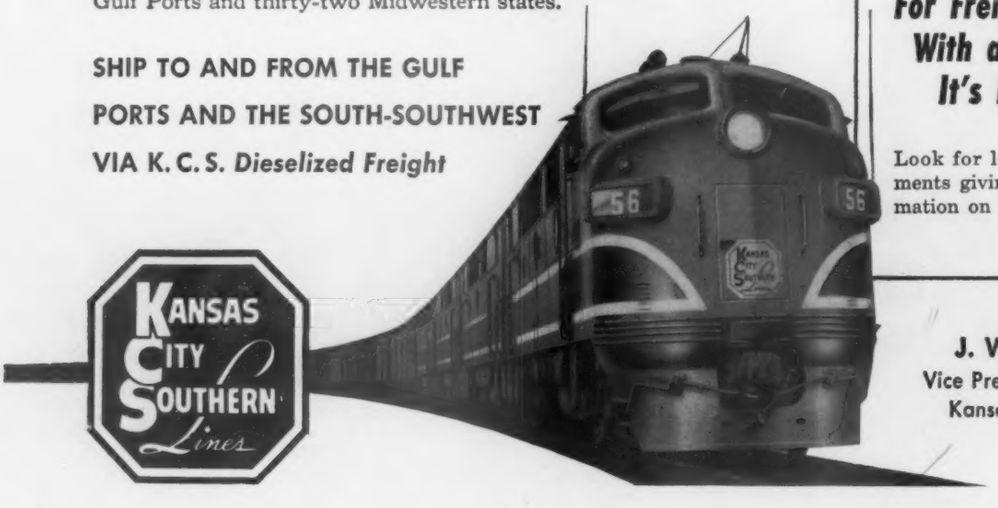


Dieselized Freight

Substantial savings in time and money are yours when you ship through the Gulf Ports—New Orleans, Port Arthur, Baton Rouge, Beaumont and Lake Charles—reached directly by Kansas City Southern Lines.

These Ports are equipped with the most modern freight handling facilities in America. They are geared for top efficiency and low handling charges. Inland rail rates are lower, too, on most classifications between Gulf Ports and thirty-two Midwestern states.

SHIP TO AND FROM THE GULF PORTS AND THE SOUTH-SOUTHWEST VIA K. C. S. *Dieselized Freight*



KANSAS CITY SOUTHERN *Lines*

KCS "77" is a crack freight manned by crack crews. It rolls south from Kansas City every night at 9:45—and carries your shipments to their destinations *on time.*

For Freight With a Date— It's KCS Lines!

Look for later advertisements giving specific information on the Gulf Ports.

J. W. SCOTT
Vice President—Traffic
Kansas City, Mo.

You can cut hopper shoppings in half by using aluminum for repairs . . . because ALUMINUM LASTS

Why go on paying corrosion's costly repair bill year after year? Nature made Alcoa Aluminum highly resistant to the coal acid corrosion that eats through heavy metal sheets in a few years. When you repair with aluminum you repair *for keeps!* Your hoppers are earning . . . not burning. Over the long haul, that saves a lot of money. You don't need to change shop methods. And besides you get a bonus in weight saving.

Get the facts and figures on Aluminum repairs for your cars

Look into the economics of aluminum for hopper repairs. Our engineers will be glad to analyze costs and material requirements for your type of car. Call your nearby Alcoa Sales Office. Or write ALUMINUM COMPANY OF AMERICA, 1816J Gulf Building, Pittsburgh 19, Pennsylvania.

For local source of supply on ALCOA Products, look under *ALUMINUM* in your Classified Telephone Directory

ALCOA FIRST IN ALUMINUM ...THE METAL THAT *LASTS*

ALCOA ALUMINUM

In centralized traffic control

fast, dependable

stands by for emergencies

Human failure or equipment breakdown . . . both *can* cause emergencies in the operation of centralized traffic control. To meet these emergencies, the failure or breakdown must be located and corrected quickly.

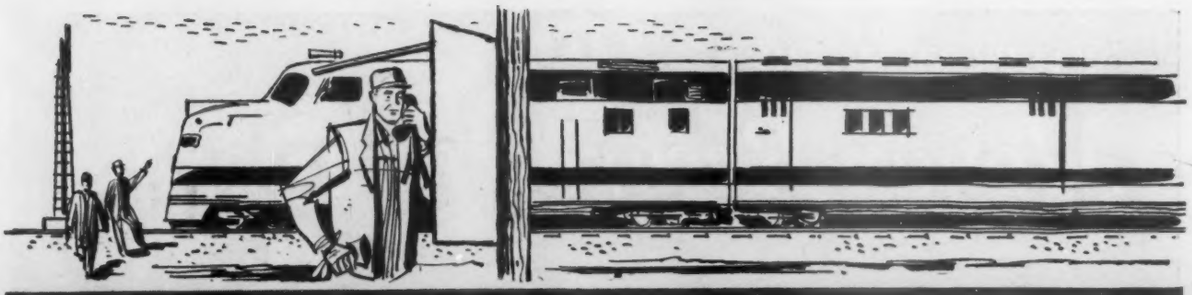
The solution lies in the fast communications with the man on the spot . . . available only through *dependable telephone service.* Automatic Electric railroad telephones are unusually well adapted to the demands of railroad service. Low bridging loss and minimum interference to or from carrier systems mean that urgent messages come through clear and strong.

Automatic Electric engineers, designers, and consultants stand ready to advise on any installation. Ask for Circulars 1697 and 1699 for specific details on these Automatic Electric instruments for railroad telephone service.

AUTOMATIC ELECTRIC

Makers of Telephone, Signaling and Communication Apparatus . . Electrical Engineers, Designers and Consultants

Distributors in U. S. and Possessions: Automatic Electric Sales Corporation
Export Distributors: International Automatic Electric Corporation
1033 West Van Buren Street, Chicago 7, U. S. A.



telephone service

Type 60 Monophone—Built for lasting service despite rugged treatment in work cars and siding booths. Designed for wall mounting . . . only 9¾" high, 11½" wide, 5" deep. Incorporates small, powerful Alnico-magnet generator.

Booth Monophone—A completely self-contained handset telephone with push-to-talk button for wayside booths. Includes factory wired battery box. Automatic Electric's high efficiency magneto circuit increases transmitter output to the line.

Type 10 Portable—Track inspectors, signal and communication crews . . . every train can use this efficient portable unit anywhere along the line. It connects to any dispatcher circuit. Alnico generator, optional, produces powerful ring on "message" circuits.

Type 43 Monophone—This compact Monophone mounts anywhere . . . on the edge of a desk, against a wall, or on a post. Case measures only 6⅝" high, 3¼" deep, 6⅜" wide over-all; the handset is just 9" long. Use it for dispatcher's circuits.

PAGES FROM THE

Monon Record of Progress

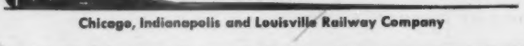
America's First Completely Dieselized Class 1 Railroad 1 2 3 4 5

57 Diesel Electric Locomotive Units

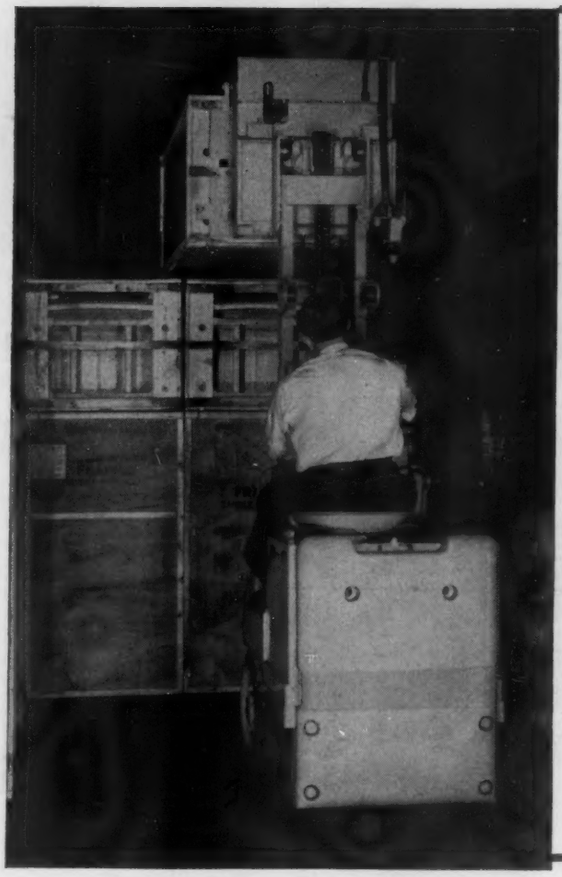
The Monon that offers you service-with-a-plus today is a new, completely modernized Monon. It is the product of four years of carefully planned progress in every department of the road. The unfolding pages of the Monon Progress Record will present *factual proof* that the Monon is equipped to deliver fast freight service of the highest order. Monon means Business. Your first shipment will prove it.

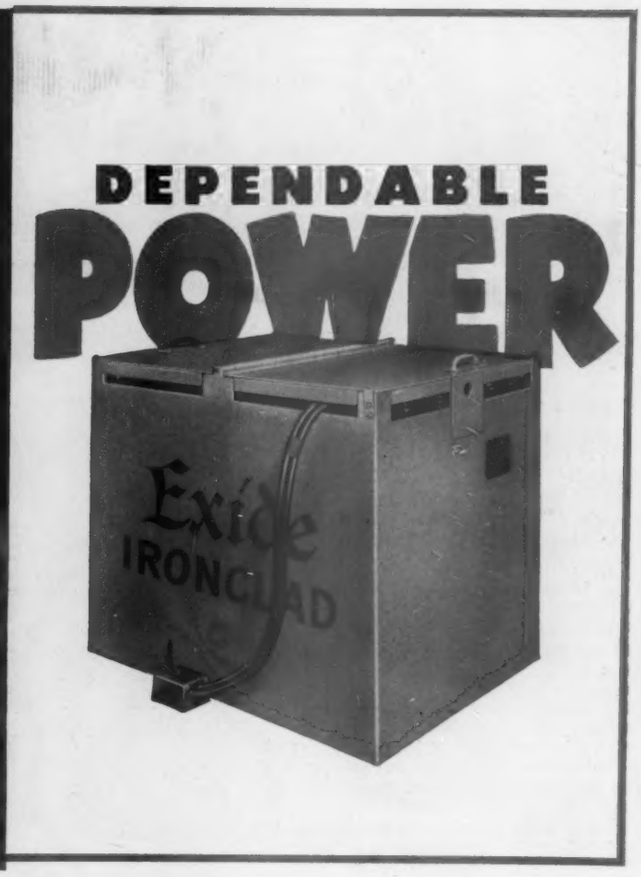
MONON

THE HOOSIER LINE



Chicago, Indianapolis and Louisville Railway Company





You get LOWEST COST OPERATION with

Exide-Ironclad Battery POWER

Exide powered electric industrial trucks assure the lowest costs for truck operation . . . costs for recharging run as low as 2 cents per KWH of battery capacity . . . seldom more than 15 cents per shift to maintain. You gain in many other money-saving ways when your trucks are powered by Exide-Ironclad Batteries. You get:

- instant surge of power to meet all demands in *start-stop*, *lift-and-shift* manipulations . . . plus finger-tip control for split-second handling, easy maneuvering, accurate spotting.
- full-shift availability, with trucks handling as much tonnage during last hour as first, and at practically no difference in speed.
- high truck availability—freedom from mechanical troubles, and with no unscheduled periods of down time.
- easy to keep charged—batteries absorb a very high percentage of charging current.
- exceptionally long life—proved on more than 100,000 heavy-duty jobs.
- inherent safety—quiet operation with less worker fatigue; no vibration to jar work in transit; no oil seepage on floors to create accident hazards.
- wide range of sizes for every make of battery-electric truck; compact construction permits standardization.

Combined, these and other Exide-Ironclad characteristics assure you dependable performance, day after day . . . for years.

Exide-Ironclad Batteries are the Best Power Buy . . . AT ANY PRICE

Write for more facts and FREE copy of Exide-Ironclad Topics. It contains latest developments in materials-handling . . . shows actual case histories.

"Exide-Ironclad" *Reg. Trade-mark U.S. Pat. Off.*

THE ELECTRIC STORAGE BATTERY COMPANY, Philadelphia 32 • *Exide Batteries of Canada, Limited, Toronto*

1888 . . . DEPENDABLE BATTERIES FOR 62 YEARS . . . 1950

WHEREVER YOU USE WOOD..

IN THE DESERT, crossties broom, shatter and split from extreme dryness and heat. Solutions made with BARRETT* Coal-Tar Creosote retard this, and also reduce mechanical wear of crossties through their lubricating action on the wood fibers. In poles, heavy treatment with BARRETT Coal-Tar Creosote substantially reduces checking and splitting.

IN THE NORTH, poles must resist the tremendous weight of frequent sleet storms. Avoid preservatives which *weaken* the wood. BARRETT Coal-Tar Creosote allows poles to retain their maximum strength, and helps to keep the poles at their best and hold the lines aloft.

IN THE SOUTH, prolonged high temperatures cause light-bodied preservatives to leach and evaporate from the wood, thus exposing the wood to termite attack and decay. BARRETT Coal-Tar Creosote, heavier bodied and of lower volatility, prevents this condition. It stays in the wood longer under all conditions—doesn't "run out" on the job.

IN THE SWAMPS, forces of decay are almost at their maximum of destructive power. High moisture content and infection from other decaying wood and debris are ever-present menaces. Poles properly treated with BARRETT Coal-Tar Creosote have survived under swamp conditions for years.

IN FRESH WATER, many preservatives leach out of wood. BARRETT Coal-Tar Creosote resists this leaching action. Being only negligibly soluble in water, it is the preferred preservative for use on submerged wood structures, or those exposed to the powerful action of rapidly flowing water.

IN SALT WATER, marine wood-borers give a preservative its severest test. Of hundreds of preservatives that have been tried through the years, *Coal-Tar* Creosote is the only one that has proved consistently effective against teredos, limnoria and other salt-water enemies of wood.

THE BARRETT DIVISION
ALLIED CHEMICAL & DYE CORPORATION
40 Rector Street, New York 6, N. Y.

Use Barrett*

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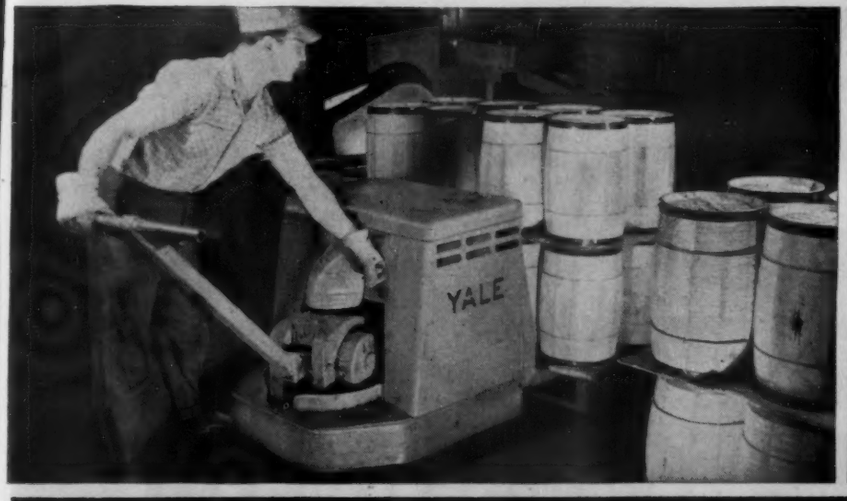
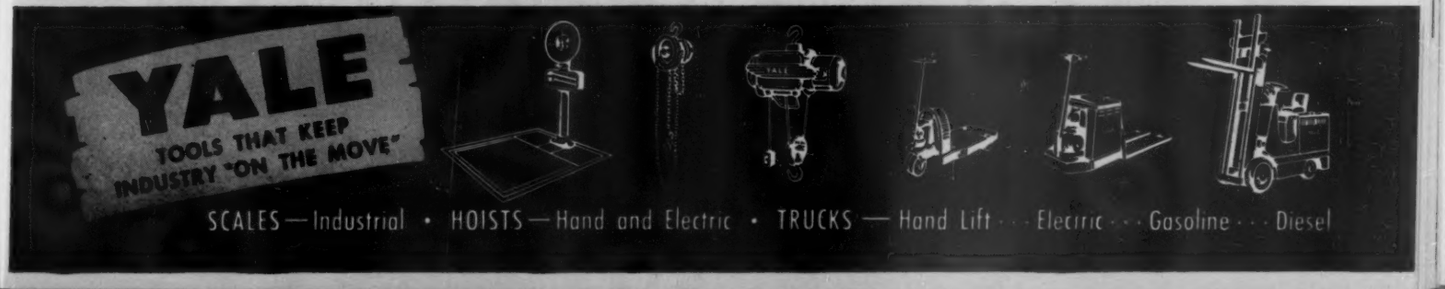
L-44

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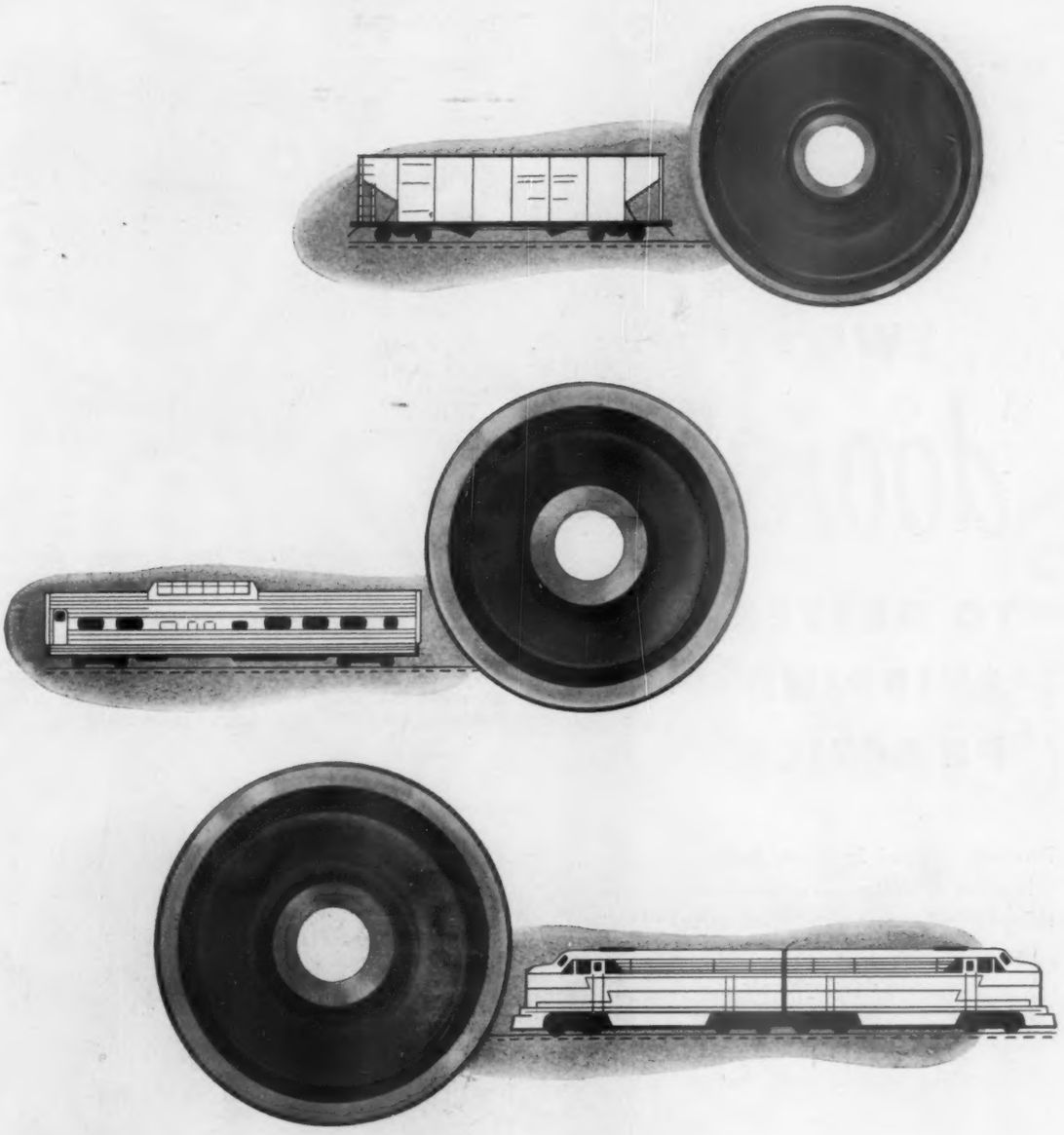

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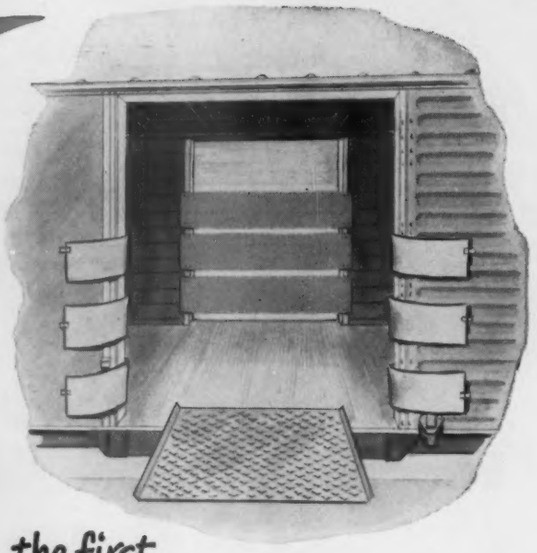

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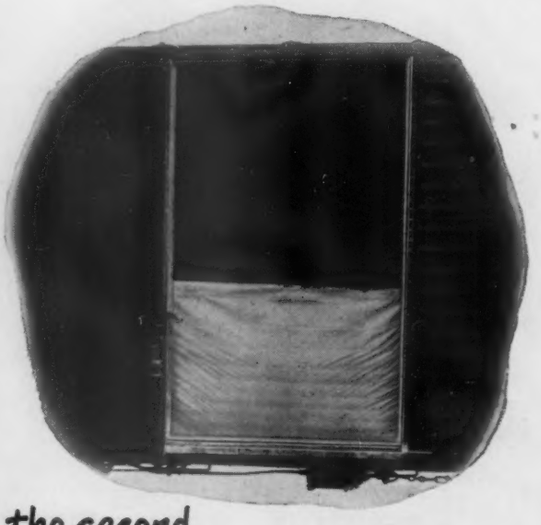

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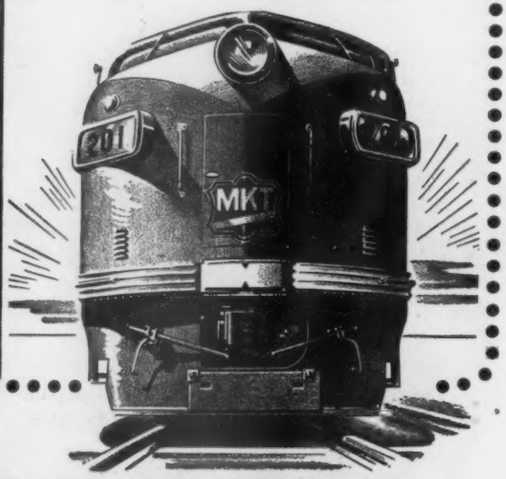

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NATURAL ROUTE SOUTHWEST

42

VICTORY FOR THE UNIONS, BY CONSENT OF CONGRESS

President Truman has contrived under duress to glue one more blowout patch on the oft-punctured Railway Labor Act, so the railroads are still running by the kind consent of Messrs. Hughes and Kennedy. Next to complete capitulation to union demands, seizure of the railroads by the military authorities was just what the brotherhood leaders wanted. They expressed their derision for the emergency board appointed by the President; they appropriated many days of the valuable time of one of the President's ablest assistants—Dr. John Steelman; and they imposed heavily on the time of the President himself. The Chief Executive is not, of course, so free of other important duties that he can afford the time thus to act as mediator every few months in a dispute involving 15 one-hundredths of one per cent of the population. If the grievances of all the rest of the American people were to receive from the White House proportionately as much attention as the railway unions insist upon and get, then the President and his staff would have no time at all to devote to public business.

Who is to blame for this state of affairs—practically hand-made to give the creatures in the Kremlin the very kind of propaganda support they need to portray the United States as a chaotic horde of greedy and disunited self-seekers? Are the union leaders at fault when the law—as actually enforced, or rather not enforced—puts a premium on the kind of anti-social conduct which has become a habit with them? No; the union leaders have simply been following the pattern of maximum benefit to themselves as permitted under the existing law as it is administered. Union leaders who, under such circumstances, would tamely accept an "emergency board" award would probably soon cease to be union leaders. Experience has shown again and again that unionists invariably get additional concessions when they flout the recommendations of "emergency boards"—so that they may be expected to go on doing so *ad infinitum*, until some teeth are put into the Railway Labor Act.

Needed—Teeth

Putting teeth in the Railway Labor Act is the duty of Congress—nobody else can do it. Yet that body, with railway strikes or the threat of them now practically a constant occurrence, refuses even to consider the Donnell Bill, which is the only practical proposal now available for enforcing *once for all* the peaceful settlement of labor disputes on the railroads. Even the Republicans seem to be cold to Senator Donnell's project

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—including a good many who are reputedly "anti-union." The reason we have these strikes or the threat of them constantly hanging over us is that Congress has enacted various legislation which makes it practically impossible for a railroad to fight a strike (e.g., the law against the interstate transportation of strikebreakers); and because Congress remains inert when repeated strikes and strike threats demoralize transportation year after year.

Nine Years of Inaction

There has been no genuine labor peace on the railroads since 1941 when President Roosevelt sabotaged the Railway Labor Act by insisting, for the first time, that the railroads make concessions beyond those proposed by an "emergency board." Thus Congress has had almost nine years in which to plug up the holes blasted in the Railway Labor Act by President Roosevelt, but in these nine years it has done nothing, absolutely nothing. On the contrary, it seems disposed even now to reward the uncooperative behavior of the railway unions by legalizing for them the closed shop and the check-off.

Why does Congress do nothing in the face of the recurring crises the country's economy suffers by reason of these constant strikes and threats of strikes? The answer lies obviously in the assumption that action to correct existing chaotic conditions would offend organized pressure groups, while there are no pressure groups working in behalf of forthright dealing with the menace of recurrent strikes. Hence there appears to be nothing the country can do but to suffer patiently until such tactics as those which have now become standard practice lead to something pretty close to disaster. When that time comes, it may develop that there will be more votes to be won in appeasing the nation at large by outlawing railroad strikes than there will be in continuing to appease the unions by letting them flout the "emergency boards" as frequently as they wish, and with no danger whatever of any untoward consequences.

So the railway unions are back in the saddle again—not that they have been out of it very far, either, since the New Deal came into power. The military "take-over" is just what the brothers wanted—they doubtless now hope and expect that railway managements will, at length, get sufficiently weary of military control to feel that buying back their freedom by a few more concessions to hard-boiled unionism would constitute an acceptable bargain.

Pessimism Natural—But Unjustified

Pessimism in such circumstances is a natural but unjustified reaction. The railway unions are losing friends and alienating people cumulatively by their now firmly established habit of anti-social behavior. The prohibitionists had things their way, too, for a good long time, with the assistance of a subservient Congress. But the prohibitionists pushed their advantage too far, as always happens in such cases—and great and fast was their fall. The unsafest place in the world is the top of the heap, because there is no other direction to go from there but down.

The railways' negotiators in this case—Messrs. Loomis, Horning and Mackay with their staff assistants—deserve the deep gratitude of the railroads for the long months of devoted and exhausting labor which they put in on these proceedings. No higher tribute could be paid to the ability of these men than the demand the brotherhood chieftains set up toward the end of the discussion that the railroads replace their negotiators with some chief railway executives. No man seeks to have his adversary replaced in the hope or expectation of getting an abler opponent.

If the railroads were putting forth as much effort on the aggressive and constructive side of their union relations as they are in purely defensive activities, and with men of the same high caliber in charge, probably their cause would be farther along than it is. No campaign can ever be won wholly or even mainly by defensive strategy, however brilliant.

OTHER INDUSTRIES A SOURCE OF IDEAS

Recently a railway architect said he made it a point "to see that I do not fall into the habit of lunching consistently with other railway employees, but endeavor frequently to have luncheon with men in other industries."

He added that he had found these "outside" contacts both stimulating and informative. This man was not adopting a snobbish attitude toward his colleagues—he was, instead, admitting that he had much to learn, and was deliberately placing himself in contact with persons who could impart information he could use. He was not using his friends outside the industry merely for what they could give him, because he, in turn, possesses knowledge useful to them. Reciprocal interchange is beneficial to all participants.

He went on further to say that, whenever he has an assignment to prepare plans for a new railway facility, he inspects the features of similar structures designed for other industries, as well as the ones most recently constructed by other railroads. It is his opinion that we are living in a scientific and specialized age and that, since many aspects of railway operations have features common to those of other industries, every railroad man in a responsible position can learn much from the specialists of those industries whose interests parallel his own.

Such "outside" contacts are the best available insurance against provincialism and intellectual in-breeding, where a man becomes unduly steeped in the traditions and practices of his own industry, and not conversant

with new developments. There is hardly a department on the railroad where the supervisory staff could not benefit by emulating the example of this railway architect. For instance, contacts by railway officers in the building, water service, mechanical and stores departments with responsible men in the oil industry might very well develop some valuable and advanced ideas on the unloading, storage and handling of fuel and lubrication oils.

Opportunities for such profitable "outside" contacts are practically unlimited for railway bridge and building officers because they have so many kindred fields to draw from. They can profitably spend time with men employed by the large firms engaged in the design and construction of bridges and buildings, and with men specializing in lumber, steel, waterproofing, fire prevention, hardware, paint, plumbing, plastics, concrete, electricity, electronics, lighting, sheet metal, machinery and many other fields. Almost anyone is willing to discuss his work with an interested inquirer, because it is a subject upon which he considers himself somewhat of an authority.

THE MECHANICAL ASSOCIATION MEETINGS

Last year, when the five associations of mechanical supervisors which constitute the Coordinated Mechanical Associations and the two electrical sections of the Association of American Railroads met at Chicago, a total of 1,973 railroad officers and supervisors were in attendance.

What are the prospects for this year, when these same organizations hold their annual meetings at Chicago on September 18 to 20? The answer is in the control of railway managements.

All of these organizations are going concerns and there is every reason to believe that their programs will be fully as constructive this year as last, some even better. The major difference will be in the exhibit, which will be organized by the Railway Electric Supply Manufacturers' Association, with no specifically mechanical exhibit, whereas, last year, the Allied Railway Supply Association exhibited mechanical equipment and supplies and there was no specifically electrical exhibit.

The major task of the Locomotive Maintenance Officers' Association is to deal constructively with the problems arising from the rapid growth in the volume of Diesel motive power, without forgetting that many roads still have a substantial proportion of steam locomotives needing more efficient maintenance.

The Car Department Officers' Association brings a nationwide "grassroots" viewpoint to questions of car inspection and maintenance which has proved of great value to the Mechanical Division of the A.A.R., aside from the value of its work to its individual members and the roads by which they are employed.

The Railway Fuel and Traveling Engineers' Association is faced with a real challenge. Is there no longer any need for fuel economy on steam locomotives? Have all the mutual problems pertaining to the training of locomotive crews and the selection and training of road supervisors been so completely solved that there is no further need of this organization?

Ample testimony as to the need for the Air Brake Association is found in its revival in 1947, to complete the coverage of the Coordinated Mechanical Associations, after a long suspension of its activities.

The two electrical sections, one of the Mechanical Division, one of the Engineering Division, are meeting the need for closer coordination by holding their meetings together, and are also joining with the Locomotive Maintenance Officers' Association in the discussion of subjects pertaining to Diesel locomotive maintenance.

All of these organizations deserve full support from railway management. By support is meant permission and encouragement to work on committees, attend meetings and participate in program planning. In this way these associations can be made a powerful force for the improvement of the members, individually, and for the benefit of the railroads by which they are employed. What supervisor worth his salt will come away from these meetings without at least one idea which will be worth more to his railroad than all the expense involved?

A SHIPPER SPEAKS HIS MIND ON SUBSIDY

"It seems well contended that the chief evil in the subsidy system, from the point of view of the broad public interest, is that, instead of resulting in cheap transportation, subsidies actually increase the total cost of transportation—because the total cost includes not only the out-of-pocket cost to the users, but also to the general taxpayers, as reflected in the subsidies.

"It is my personal feeling, as the representative of a shipper dependent upon the railroads for his successful operation, that an unfair hardship falls upon such users as long as there is artificial diversion of traffic to other modes of transportation as a result of public subsidies or of unequal federal regulation.

"If, as a result of subsidies, or of unfair regulation, the competitors of the rails are enabled to draw off a large and increasing volume of the higher rated traffic, it can only mean that the diminished residual volume of traffic dependent upon the rails must pay higher rates to enable the railroads to provide the essential service required.

"It is indeed a strange, as well as an unfair, situation, in which a shipper by rail is required, as a taxpayer, to contribute to the support of the very condition which makes transportation by other agencies available to other shippers at lower rates while, at the same time, increasing the cost to him for the transportation without which he cannot get along."

—From a talk by Earl B. Smith, vice-president—director of traffic, General Mills, Inc., Minneapolis, Minn.

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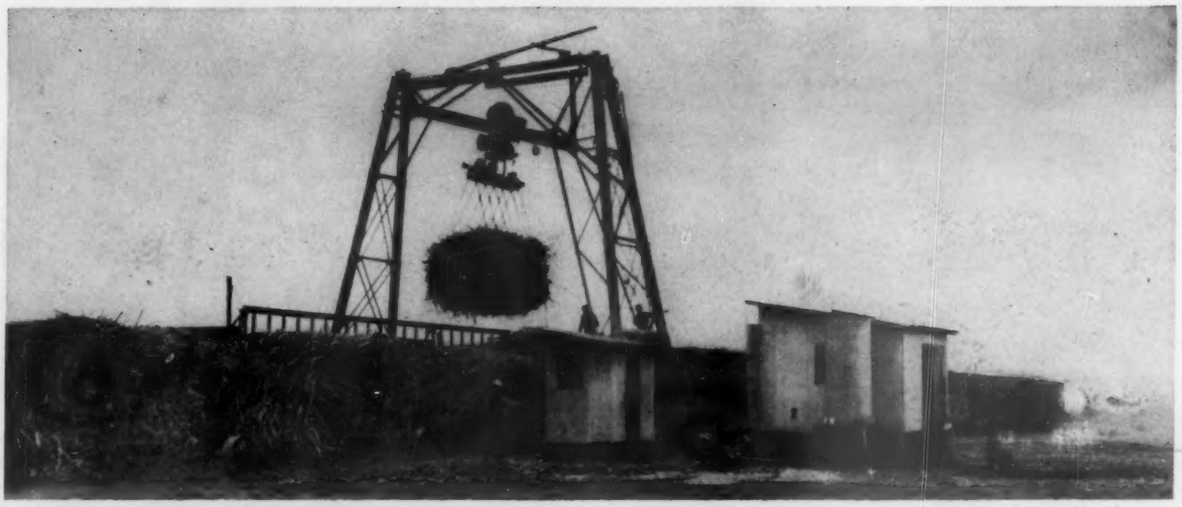


Above—Cars are loaded from the field wagons by the cane hoists. Below—A loaded cane train leaving a cane hoist

Prosperity of vast farming area is fostered by fast, efficient rail service . . .

Transporting Everglades Cane

The mucklands of the Lake Okeechobee district of Florida support a thriving agricultural community now on what was a part of the almost impenetrable Everglades not much more than a quarter of a cenutry ago. The Atlantic Coast Line and the Florida East Coast, by opening up the fertile area to northern markets by means of fast rail transportation, have played and continue to play a most important part in the development of the area. They have taken a particularly outstanding part in the promotion of a large sugar cane industry in this section.

During the sugar cane harvesting season a remarkably fast interchange operation is performed several times a day between the Atlantic Coast Line and the Florida East Coast, at Lake Harbor, Fla. Cane trains, on their way to the large "sugar house" at Clewiston, require fast handling to keep the mill supplied for 24-hr. a day operation.

There are some 30,000 acres of sugar cane land along the shores of southern Lake Okeechobee, from Moore Haven on the west, to Canal Point on the east shore of the lake. Of this acreage, approximately 88 per cent is owned by the United States Sugar Corporation and 12 per cent by independent growers. The A.C.L. serves about 33 per cent of this acreage and the F.E.C. the remainder, but the entire crop must move either in whole or in part over the former's line to reach the mill, which is local on the A.C.L. The Coast Line operates an average of five cane trains daily and the F.E.C. three trains, the latter operated on schedules to connect with three of the A.C.L. trains at Lake Harbor. This operation continues throughout the entire harvesting season, which normally

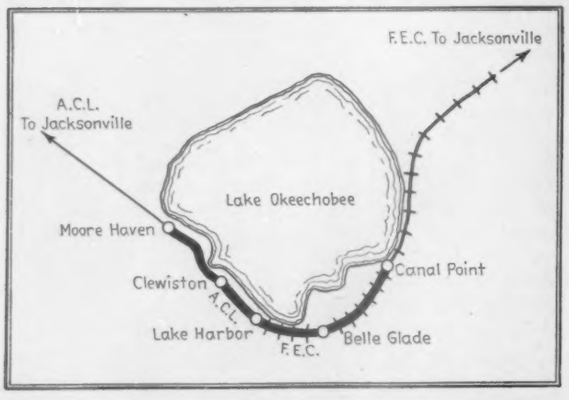
extends from the last half of October to the last half of April.

Until 1942, this cane movement was handled by sugar company crews, with an engineer-pilot from the railway involved on each train. In that year, the National Railway Adjustment Board ordered the sugar company crews off the trains, except on trackage owned by the sugar company, and awarded the job to the train and engine crews of the A.C.L. and the F.E.C. This immediately produced a complicated set of operating problems, since it required the use of three sets of crews and three different locomotives on the majority of the cane trains operated, with a maximum haul (from Canal Point to Clewiston) of 30 miles. However, by means of complete cooperation between the railways and the sugar company, the job is handled smoothly and efficiently.

Gathering Operations

In harvesting the crop, the cane is first set on fire to burn away as much of the leaves as possible. The cane is then cut and stripped until only the smoke-blackened stalks remain. These operations are all manual, as no machinery has yet been invented that will operate safely and efficiently in a tangled canebrake. The stalks are, however, loaded mechanically into so-called Athey wagons—field wagons pulled by a tractor to the cane hoists. These hoists are cranes which straddle the rail sidings and transfer the cane from the Athey wagons into the railway cars.

Each cane hoist is equipped with lights for night operation, but these are used only infrequently as, normally, the daylight loading is sufficient for the round-the-clock operation of the mill, which has a capacity for grinding between 12 and 15 carloads of cane per hour. There are six of these cane hoists north of Clewiston, between that city and Moore Haven, on the A.C.L. Three more hoists are located on the A.C.L. south of the mill, between Clewiston and Lake Harbor and six hoists are situated on the F.E.C. between Lake Harbor and Canal Point. In addition, there is a hoist at Clewiston, within the yard limits of the sugar company and served by its employees. There are also eight hoists on the Canal Point plantation of the sugar company, this plantation having several miles of sugar company tracks connecting with the F.E.C. at Canal Point.



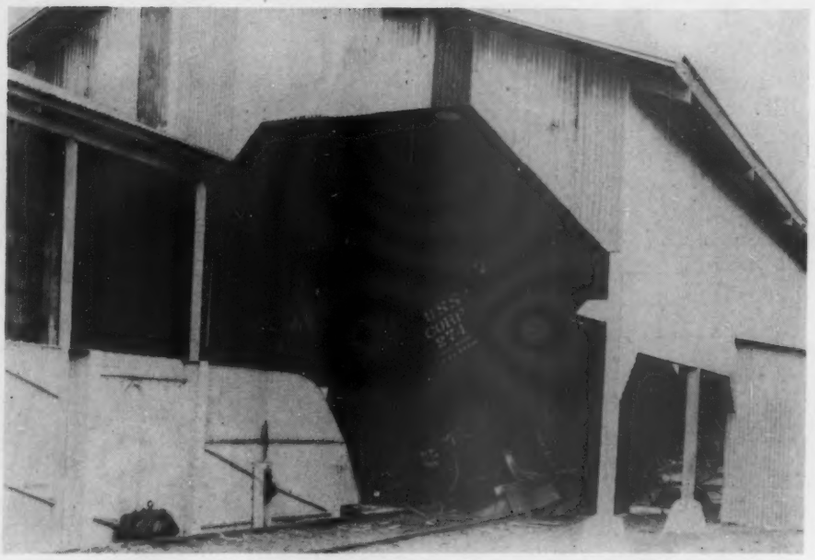
Florida East Coast and Atlantic Coast Line operations are coordinated to serve the area bordering Lake Okeechobee on the south

Getting Cane to the Mill

There are 469 cars, owned by the sugar company, which are used for the cane hauling. All but 75 of these cars were built new, specially designed for this service, and they are maintained at the railway shops belonging to the sugar mill, where, under the supervision of a master mechanic, all cane cars and the seven locomotives belonging to the sugar company are repaired.

The distribution of these cars to the cane hoists requires the cooperation of the sugar company and the two railroads.

The former advises the railways what fields are to be harvested on any given day and what hoists will be in operation. The empties are delivered by the mill to the A.C.L., which distributes them to its own cane hoists and also to the F.E.C. at Lake Harbor for distribution to cane hoists on that line and on the Canal Point plantation. The cars are handled on a joint mileage basis that



Left—The receiving yard at the mill has capacity to support 24-hour day operation

Right—Cane cars are automatically dumped into the receiving hopper at the mill

was worked out in the interests of simplicity and fairness. The trainloads of empties are as carefully scheduled and dispatched as are the inbound trains of loaded cars.

The normal load is 20 to 24 tons of cane per car, but there are occasional carloads of as much as 30 tons. Between Moore Haven and Clewiston, the trains are operated by work orders, while between Clewiston and Lake Harbor they are operated on round-trip running orders. Depending upon the amount of traffic to be handled from the F.E.C. interchange, some of the trains are run as set-out and pick-ups, while others are run as through trains. Ordinarily, trains between Moore Haven and Clewiston average between 30 and 40 cars, but 90-car trains are frequent from the southern fields.

The cane cars are stacked high with the stalks and the initial step in unloading at the mill is to pick off the top of the load with grab irons. One of the rack sides is then dropped to empty the contents of the lower part of the car into the hopper. Automatic car pullers are used to spot the cars for unloading. For several seasons practically all of the inbound cars of cane were run through a washer in the mill yard to remove as much dirt and trash as possible; however, as a result of improved loading in the field, all washing of cane was discontinued in December, 1949.

Except in extremely inclement weather, the movement of cane to the mill continues around the clock and seven days a week during the harvesting season. About once a month, operations are stopped for an eight-hour period, to permit repairs and replacement to the mill machinery.

Cane from the plantation at Canal Point is handled by four different crews and four locomotives on its way to the mill. Company locomotives and crews move it over the company's tracks to an F.E.C. siding at Canal Point; F.E.C. locomotives and crews handle the trains from there to Lake Harbor; A.C.L. locomotives and crews from Lake Harbor to Clewiston yard limits; and there is is turned over to other sugar company crews and locomotives for spotting service.

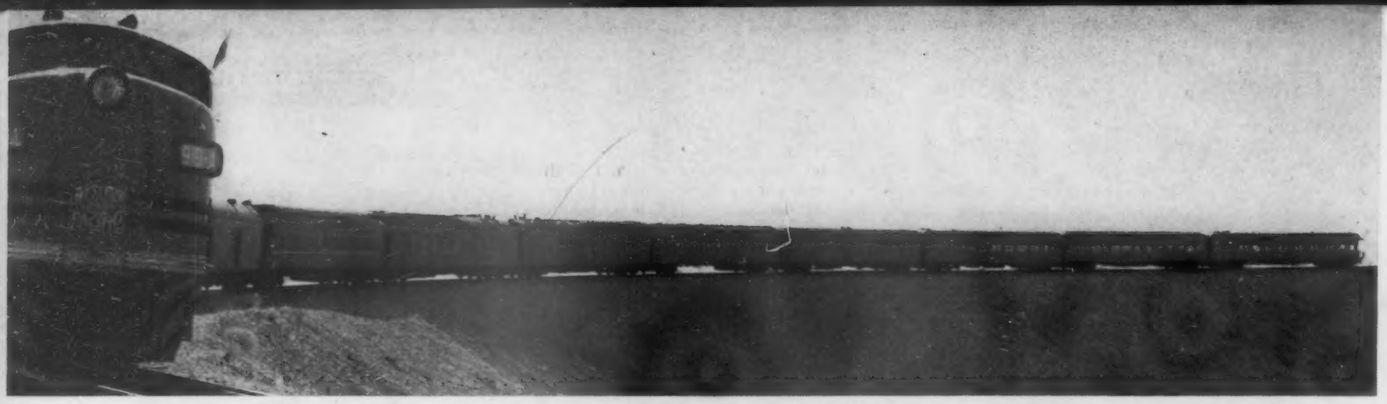
Two of the hoist sidings have a loading capacity of 21 cars; one can load 8 cars and all the others are of 15-car capacity. The cane interchange track at Lake Harbor has a capacity of 110 cars. All of these facilities are used only for cane movement, the interchange of all other freight taking place on another siding at Lake Harbor.

Cane train extras have a car limit of 110 cars, either loaded or empty, and trains of 100 to 110 cars are not unusual. This results in a train load of approximately 4,400 tons maximum; it is handled without difficulty because of the lack of grades on any of the trackage.

The mill at Clewiston produces raw sugar, blackstrap molasses and dehydrated sugar cane pith. Production of the latter item from what was formerly waste began during the 1948-49 season and now amounts to two or three carloads daily. It is used for poultry litter. The sugar is all shipped to Port Wentworth, Ga., for refining and is routed according to the ratio of cane tonnage produced along the two lines. Sugar from cane harvested along the A.C.L. is taken directly from Clewiston to Savannah by that railway. Sugar from cane harvested along the F.E.C. is taken to Lake Harbor by the A.C.L. and turned over to the F.E.C. for movement over that railway's new cut-off to Fort Pierce, thence over the main line to Jacksonville, where it is returned to the A.C.L. for movement to Savannah.

The raw sugar is moved direct from the mill to conveyors into box cars, where it is loaded in bulk to the maximum load limit of the cars. Bulk loading of raw sugar, in general effect only for the past two seasons, requires Class A equipment with tight floors, walls and roofs, which must be clean and free from any materials that might damage the sugar. All of the box car requirements are supplied by the A.C.L., requiring considerable empty mileage in movement from up-state yards.

This complicated cane movement must be carefully supervised to achieve the maximum efficiency. The A.C.L. maintains a general agent at Clewiston, a joint transportation and traffic officer, who is in direct charge of the train movements. The F.E.C. has a trainmaster at Belle Glade who handles train movements over that railway. The seasonal jobs on the cane trains are posted and bid for in the regular fashion and the larger percentage of the train and enginemen on these runs are experienced men, who bid in the job each year.



Nine-car special which took the president and his party over the entire Western Pacific, for 18 separate get-togethers with 3,119 employees

Western Pacific Fulfills "Operation Nosebag"

Last April President F. B. Whitman of the Western Pacific personally invited every one of the road's 5,000-odd employees to dinner, as reported in *Railway Age* of May 13, page 62. The physical job of feeding this host, scattered over 1,200 miles of railroad, much of it in salt flat, desert, or high mountain country, was dubbed "Operation Nosebag," and given highly entertaining treatment in the road's magazine "Mileposts" for May. On a recent trip to W.P. headquarters in San Francisco, Cal., a *Railway Age* editor borrowed a selection of photographs from that article in the belief that so unprecedented a gesture of management will be of interest to railroaders everywhere, and their customers. The text is cribbed shamelessly from "Mileposts."—Editor

Operation Nosebag" comprised a series of 18 dinner parties (or breakfasts or luncheons) held at points along the line. Where no banquet facilities existed, meals were served on two dining cars on the nine-car special train which carried the president and party on the tour. The special served also to gather up railroaders along the line traveling to and from dinner points. Altogether, 3,119 meals were served at the 18 get-togethers, which covered about 70 per cent of the railroad's staff. The largest affair was a banquet for 500 in the Fairmont hotel in San Francisco. The most difficult problem of logistics was to handle the concentration of W.P. people at Portola and Keddie, Cal., where no adequate local dining facilities existed. Reno, Nev., being the nearest possibility, a special train was run all the way from Bieber (northern gateway connection with the Great Northern) which consolidated with the president's special at Reno Junction —a distance of 205 miles each way.

All 26 general chairmen of the labor organizations affiliated with the W.P. were invited by President Whitman to accompany him on the entire trip. Seven came for the whole of the trip, and most of the remainder attended at least one of the get-togethers. Negotiations which had been proceeding daily between representatives of the operating brotherhoods and the railroad were moved onto the special train and continued in a business car during the course of the tour—between meals.

For each get-together the program was the same:

(1) Short talk on safety by H. C. Munson, vice-president and general manager

(2) Remarks from one of the general chairmen on the mutual interest of employees and management

(3) Talk by Mr. Whitman

(4) Showing of new color movie, "California Zephyr"

The president's talk was short and to the point. Here are some statements selected at random:

"Our progress in increasing our freight business will not be spectacular but will be slow and steady."

"We have found that selective rate cuts must be made in some

Dinner party at Stockton, Cal.

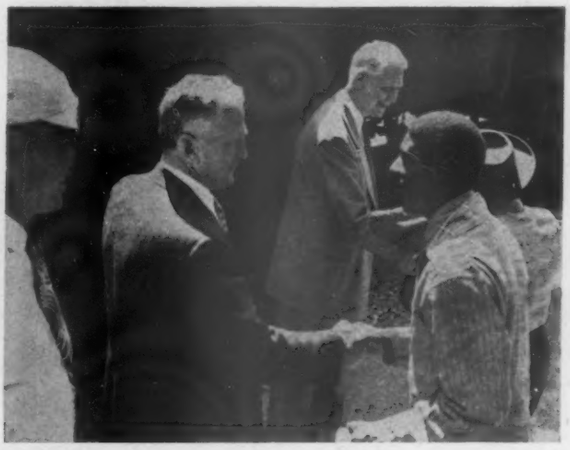
instances to regain or retain for us certain types of freight traffic."

"Freight service must be speeded up. This means faster running on the road and less delay in terminals. But it does not mean a change in the policy of running long trains, nor does it mean a lot of one-car special runs in terminals. That would increase costs."

"We have good labor organizations on the W.P. represented by able and skillful leaders who are determined to press vigorously for all they feel their men are entitled to. On the other hand, management has no intention of 'giving the railroad away' while engaged in collective bargaining."

"In five years I hope to know most of our employees by name."

W. P. employees at Pronto, Nev. waiting to board the president's special



Guests are greeted by Vice-President Munson (left) and President Whitman (right)

Left—Remarks by President Whitman: "We need new and progressive methods and ideas and we are determined that we shall have them because we know that such methods and ideas will benefit us all." Right—Labor negotiators continued their sessions aboard the business car while the train was on tour

Big crowd for the Berkeley (Cal.) get-together

Looking north from the coaling station over the new engine service building and car repair tracks at Winston-Salem. The exit from the loop track is at the extreme left

"Service Stations" for Smaller Terminals

New engine facilities at Winston-Salem, N.C., and Pulaski, Va., save time in end-of-run servicing of Norfolk & Western locomotives at these points

By WALTER L. TURNER, JR.
Eastern Engineering Editor, *Railway Age*

Encouraged by the successful operation of its locomotive "service stations" at Roanoke, Va., and Williamson, W. Va., the Norfolk & Western has recently completed two smaller, but similar, installations at terminals on two other important lines.* One of the terminals is at Winston-Salem, N. C., at the end of a 122-mile line extending south from Roanoke, Va., while the other is at Pulaski, Va., on the line from Radford, Va., to Bristol.

These two new installations handle a combined average of 25 steam locomotives daily. They have effectively reduced the time required for end-of-run servicing of the engines by reason of the better track arrangements afforded, as compared with the previous layouts, and because of the increased efficiency of employees brought about by the more convenient and pleasant working conditions in the new buildings.

At both locations the N. & W. has made extensive revisions of the track layout and has constructed new engine service buildings, each of which contains a machine shop, office space and wash and locker rooms. Also, the work has involved improvements to the car repair facilities at each point, and the installation of new ash-handling equipment, and coaling and sanding facilities.

The latter are of particular interest in that both coal and sand are handled within a single structure.

*The service facilities at Williamson were described in *Railway Age* of October 11, 1947.

At Winston-Salem

Prior to the recent improvements at Winston-Salem, engines were serviced at Fogle Street yard near the heart of the city. Locomotives were lubricated and repaired in a single-track engine shed of the stub type, requiring that each locomotive be reversed in leaving the shed. The ash-handling and the coaling and sanding facilities were so arranged that as many as three changes in direction

were required to complete the servicing operation. To relieve the situation, additional outside inspection pits had been constructed at four points in the area. Various auxiliary buildings had been constructed as changing conditions required, but the restricted area open to expansion had prevented some of them from being placed most effectively.

Car repair activities, on the other hand, were located at North yard, near the north edge of the city, and, while these had been added to from time to time, there was still ample room here for expansion. In fact, as the size of locomotives increased, an 85-ft. turntable at Fogle Street was supplemented by a loop track built at North yard for turning engines. These factors influenced the decision to abandon all of the engine facilities at Fogle Street and relocate them at North yard. In addition to gaining an improved layout and modern facilities for the engine terminal, an opportunity was presented for modernizing the car-repair facilities and for consolidating the storekeeping activities for both operations.

The new terminal area lies to the west of North yard, which, in turn is west of the main track and only a short distance south of the connections leading to the loop track. The principal feature of the terminal is the engine service building, which is of brick and steel construction with concrete foundation, floor and roof. This structure comprises two bays, the westerly bay being 29 ft. by 135 ft., while the easterly bay is 26 ft. by 246 ft., with the long dimensions in each case in a north-south direction. The west bay is 24 ft. high and contains the enginehouse proper. The east bay, only 12 ft. high, houses a machine shop, a storeroom, offices, and wash and locker rooms. The interior walls and partitions are of cinder block.

A single track, with an inspection pit 115 ft. long, extends continuously through the engine servicing section of the building, and engines enter and leave through large doorways equipped with electrically operated Cornell rolling aluminum doors. Near the midpoint of the pit is a drop-table for changing pairs of driving wheels.

The arrangement of the low bay, as already pointed out, includes a machine shop, 24 ft. by 75 ft. It opens directly into the engine servicing room. To the north of the machine shop is the storeroom, 24 ft. by 39 ft., which is fitted with modern metal shelving and storage bins where materials are kept in a neat arrangement. Beyond the storeroom, at the north end of the building, is a 24-ft. by 22-ft. oil storage room.

The offices are directly south of the machine shop. This area, 24 ft. by 31 ft., contains a private office for the shop foreman, a larger room for his clerical force, a small file room, and a foreman's wash room. Occupying the remainder of this end of the building are wash and locker rooms for the shop employees, yard crews and engine crews, and two small storage rooms. The wash rooms are equipped with showers, Bradley washfountains, and metal lockers.

Heating and Lighting

The interior of the building is painted in an attractive color scheme. The walls are of vista green to the bottoms of the windows above which they are focal green. The ceilings are pale blue. All concrete floor surfaces, except in the offices and the wash and locker rooms, are hardened with the Master Builders "Masterplate" hardener. The floors of the offices are covered with asphalt tile.

Radiant heating is employed in the new building, with heating coils of Bethlehem Steel "Rayduct" pipe located

The interior of the service building at Winston-Salem has adequate daylight and artificial lighting. Part of the machine shop is shown here

Looking south from the engine servicing building at Winston-Salem. The combined Ogle coaling and sanding station, with a capacity for 75 tons of each material, is in the background. At the right is one of the N. & W.'s "J" Class engines about to enter the service building

The service building at Pulaski is similar to that at Winston-Salem but somewhat smaller. Large panels of glass blocks are a feature of its construction

in the floor slabs in the enginehouse, inspection pit and offices. Because heavy foundations are required for the shop machines, the heating coils for the machine shop are located in the ceiling slabs. Two unit heaters, located near the large doorways of the engine service room, supplement the radiant system and are used primarily to heat the air which enters when the doors are open. The storeroom, oil room and wash and locker rooms are heated by thermostatically controlled Modine unit heaters.

Locomotive stack fumes are removed from the service building by three 36-in. heat-valve roof ventilators, furnished by the Burt Manufacturing Company, Akron, Ohio. These are each 30 ft. long and are erected in line with each other, directly over the service track.

Daylighting of the engine service room is by means of large fixed-sash windows of clear glass. Those in the west wall of the service room are 10 ft. by 12 ft., and are supplemented by smaller windows in the east wall above the roof level of the lower bay. The windows of the other areas of the building have movable sash. Numerous incandescent lamps fitted with reflectors provide adequate light for night operations.

Other Facilities

Supplementing the service building are new water, fueling and sanding facilities and an ash hoist. These are arranged to permit servicing to be done with minimum delay to locomotives as they progress through the terminal. The water station, fed from a new 200,000-gal. tank, is immediately adjacent to the ash pit so that tanks may be filled while the fires are being cleaned. The ash hoist is of the skip type and removes the ashes to cars on an adjacent track.

Coaling and sanding facilities are combined into a single unit. Designed and erected by the Ogle Construction Company, Chicago, this structure is of concrete. It contains two overhead storage bins—one for coal and one for sand—each holding 75 tons. A single skip hoist elevates coal and wet sand. A selector gate permits each material to be dumped into its proper bin.

In addition to being used by the N. & W., these new facilities are also used to service engines of the Winston-Salem Southbound, a freight line extending south to Wadesboro, N. C., 99 miles. N. & W. dispatchments from the terminal are in the neighborhood of 360 per month, while those of the W.S.S. are about 90 per month. The greater part of the machine-shop work done at Winston-Salem is performed on W.S.S. locomotives.

Engines being serviced at this point move into the area from the south, over an inbound track. The first stop is at the ash pit, where fires are cleaned and tanks are filled. Engines proceed next to the coaling and sanding station, and then move into the service building for inspection, lubrication and minor adjustments. Emerging from the north end of the building, they proceed to the left around the loop track and, on returning to the terminal area, are parked on one of three storage tracks. Departure is made over an outbound track. Usually about 2½ to 3 hours elapse between the arrival and departure of an engine, of which about an hour is required for servicing.

An additional inspection pit is provided outside and directly west of the engine service building, so that locomotives may be inspected while the inside pit is occupied by a locomotive undergoing repairs. The floor slab in this inspection pit is heated by radiant heating coils.

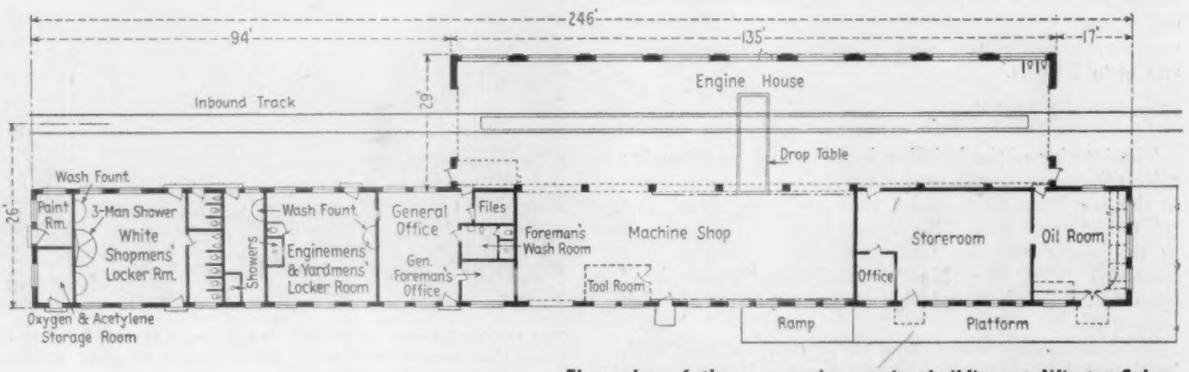
Facilities at Pulaski

The new terminal at Pulaski resembles that at Winston-Salem in many respects, the principal differences being in the dimensions, arrangement and other details of the service building, and the fact that engines are turned on a wye track instead of a loop.

More than 300 engines are serviced monthly at Pulaski. This number includes those assigned to through freight service between Pulaski and Bluefield, W. Va., via Radford, Va., those in local freight service between Pulaski and Bristol, and those operating in Pulaski yard and on a branch line extending 52 miles to Galax, Va.

The former facilities here included a frame engine shed with one through track and two stub tracks, located on the south side of Pulaski yard. The various supporting facilities were somewhat scattered, requiring extra moves when locomotives were serviced. Originally, engines were turned on a 75-ft. table near the enginehouse, but a wye was provided some years ago, for turning the larger locomotives. The coaling station was of the trestle type, while the sanding facilities were independent of the coaling station. As at Winston-Salem, a number of auxiliary buildings had been constructed from time to time, but because of lack of space, these were, in some cases, not convenient to the activities they supplemented.

The new layout is designed so that engines move progressively from one servicing facility to another, very much as at Winston-Salem. In this case, the inbound tracks are at the west end of the terminal area, and as engines move to the service building they first stop at the ash pit and water station, and then at the coaling and sanding station. Leaving the service building, engines



Floor plan of the new engine service building at Winston-Salem

Above—The interior of the Pulaski facility differs from that at Winston-Salem in that brick is used, instead of cinder block, for the interior walls

Right—The wash and locker rooms at both locations are equipped with showers and other lavatory fixtures, including Bradley washfountains

are turned on the wye and are then placed on a storage track to await dispatchment.

The service building is similar in design to that at Winston-Salem, with a high bay and a low bay, the former being 29 ft. by 140 ft., while the latter is 21 ft. by 140 ft. The principal difference in the arrangement is that no storeroom is provided, stores activities being carried out in a relatively new existing building. The machine shop occupies the east end of the low bay and is 21 ft. by 61 ft.

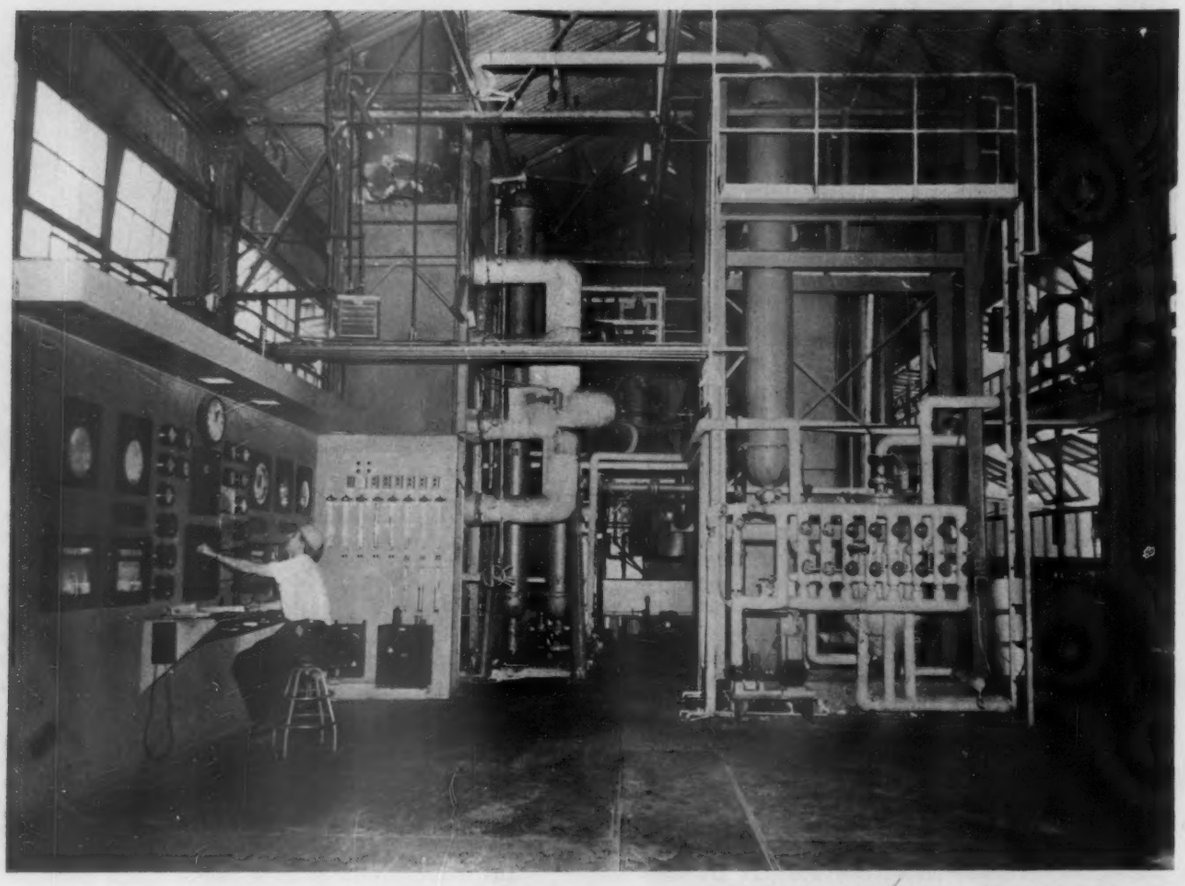
The principal construction differences in the Pulaski service building over that at Winston-Salem are in the use of brick instead of cinder block for the interior walls, and of glazed tile in the offices and wash and locker rooms. In addition, glass-block windows are used instead of metal sash. However, ventilating panels of clear glass are provided in each window of the low bay.

The heating system is the same as that at Winston-Salem—radiant heat in the floor slabs of the enginehouse, inspection pit and office, and in the ceiling slab of the machine shop. Unit heaters near the doors of the service rooms supplement the radiant system. The wash rooms are heated by unit heaters. Two 36-in. Swartwout-Dexter heat-valve ventilators, each 20 ft. long, are installed on the roof of the high bay to remove stack gases.

At both Winston-Salem and Pulaski, some improvements were made in the car-repair yards. This work, in the main, involved the lengthening of the repair tracks, some shifting of trackage, relocation of wheel storage tracks, and the addition of minor facilities to permit better operation.

The improvements at these two terminals were made under the supervision of the engineering department of the N. & W.

General view of the retorting plant and shale crushing, screening and storage facilities. The winding road in the background goes to the mine where the oil shale is obtained



Inside the pilot plant. Here various methods of retorting, etc., are tested under accurately controlled conditions

Diesel Locomotive Fuel from Shale Oil

Shale potentialities are enormous and the hope of bringing the cost of producing Diesel fuel from it at a price comparable to that from petroleum is approaching realization

By W. L. COTTON

The ascending cost of producing Diesel fuel from petroleum has not quite met the descending cost of producing synthetic fuel, but the gap is decreasing with indications that the time is not so far off when the two will meet.

Engineers at the experimental oil-shale plant of the Bureau of Mines at Anvil Points, near Rifle, Colo., have established the fact that an excellent grade of Diesel fuel can be produced from oil shale by practical processing methods, and estimated costs of production indicate that it could be profitably sold for a price only a little higher than the current price of petroleum Diesel fuel. It is expected that technological developments that will lower the estimated costs will be made at this plant and at other places where research and development activities on oil shale are being conducted.

Trucks, bulldozers, and other Diesel-driven equipment used at the plant and mine use fuel produced at the plant, and operators claim the engines have more power than when using commercial fuel. At the time these claims were first made, Boyd Guthrie, chief of the Oil-Shale Demonstration Plant, said that opinions of the operators might be influenced by their enthusiasm for the development of shale-oil fuels, but tests made by a company that manufactures Diesel engines seem to justify the operators' opinions.

Dynamometer tests showed that the Diesels did produce more power when using the shale-oil fuel. Despite comparatively high sulphur content, no corrosion has been observed to date, and it is possible that the sulphur compounds are of a noncorrosive type. Periodical inspections of the Diesel engines using the fuel indicate that it burns clean, leaving no gum or other substances that might cause piston rings or valves to stick.

Experimental production of oil from so-called oil shale is not new in this country, and production plants are in operation in several foreign countries. There were plants operating in this country for production of oil from shale and from coal (coal oil) in 1859 when the first oil well was drilled in Pennsylvania. Shortly afterwards, the plants closed and very little interest was shown in shale-oil production until the period from World War I to 1929. Discoveries then of large oil fields were responsible for the termination of shale-oil projects under way. In 1944, under the Synthetic Liquid Fuels Act, the Bureau of Mines was directed to supply scientific, engineering, and other information essential for establishing an industry producing oil from coal, oil shale, agricultural products, etc. Accordingly, the Oil-Shale Demonstration Plant was built near Rifle.

Water, electric power, transportation facilities, and reasonable access to quantities of various types of oil shale were major factors that influenced selection of the site. A good highway, the Denver & Rio Grande Western, the Colorado river, and a 66-kv. electric line parallel each other in the valley below the plant. The mines are located in a well-defined oil-shale area of 1,000 square miles with a potential production of 300 billion barrels of oil.

The writer of this article is a former railroad man and a regular contributor to Simmons-Boardman publications.

Raw Material

This 1,000-square-mile area lies in the Green River oil-shale formation which altogether covers some 16,000 square miles in Colorado, Utah, and Wyoming. The 300 billion barrels is contained in a 500-foot-thick measure of oil shale in the upper part of the 3,000-foot-thick Green River formation. The 500-foot thickness averages about 15 gallons per ton, which is too lean for commercial production using present methods. However, within this 500-foot measure there is a series of strata 70 to 110 feet thick that averages approximately 30 gallons per ton with potential production of 100 billion barrels of oil. Allowing for material left in support pillars in the mine, 70 billion barrels of oil could be recovered from the area, about twice as much as all the petroleum produced in this country to date.

Incidentally, the term "oil shale" as applied to the Green River formation is a misnomer. It is not shale and contains no oil as such. It is magnesium marlstone containing kerogen, a solid, carbonaceous substance that may be converted to oil by heating to a temperature of about 800 deg F. Speaking in terms of gallons produced per ton usually leaves the impression that it requires a tremendous quantity of oil shale to produce an appreciable amount of oil, which isn't exactly true. Getting down to terms more easily visualized, a three-inch cube of 38-gallon-per-ton oil shale will produce a Coca Cola bottle full of oil besides additional products having commercial value.

The Bureau of Mines Oil-Shale Demonstration Plant is exactly what the name implies, designed entirely for the purpose of devising, testing, and improving methods that may be used successfully for practical commercial production of shale oil. Together with other cooperating agencies and companies, considerable progress has been made toward that objective. Among companies contributing to the work are the Standard Oil Development Company which has conducted experimental operations at Baton Rouge, La., and the Union Oil Company of California that built a 50-ton-per-day pilot plant at Wilmington, Cal.

The bureau has shipped about 1,000 tons of shale to Standard Oil Development Company and about 2,000 tons

to Union Oil Company for experimental use. In addition, there are 65 other organizations cooperating with the Oil-Shale Demonstration Plant in its work on oil shale. Among these organizations are larger oil companies, chemical and related companies, universities and colleges, research organizations, and manufacturers of equipment. The Bureau of Mines laboratories and pilot plants at Laramie, Wyo., study the composition of oil shale and shale oil and develop methods for processing and using these materials. Methods developed in the laboratories there are applied in the demonstration plant at Rifle where they may be more fully evaluated in the larger equipment.

Production of shale-oil fuels consists of mining the shale, retorting the material to change the kerogen to shale oil, and refining the oil.

Mining Costs

A commercial shale-oil plant would require a considerable quantity of oil shale. It is obvious that mining costs materially affect the price of the finished products, such as Diesel fuel. Unusually low costs have been achieved using methods and equipment developed by the Bureau of Mines at the experimental oil-shale mine near Rifle. In the fall of 1949, during a 4-week test run, 148 tons of oil shale was mined per 8-hour man-shift of underground labor. The output per man-shift of total labor, including direct supervision, engineering, and maintenance, was 116 tons. During this period the average direct mining cost was 29.2 cents a ton. This included cost of operating labor, maintenance labor and parts, power, explosives, bits, drill rods, and miscellaneous items. In labor costs allowance was made for vacations, sick leave, and holidays for employees.

The total mining cost, obtained by adding estimated indirect costs such as depreciation, taxes, and insurance, to the proved direct cost, has been calculated to be 58.5 cents a ton. Bureau engineers believe mining costs may be reduced further by improvements in drilling and blasting. Experiments are being conducted in the use of rotary drilling which would allow direct use of electric power and would be more efficient than percussion drilling. Experimentation with size, pattern, and spacing of drill holes is expected to reduce explosive costs. Many of the methods developed here may find other applications in the mining industry that would reduce costs and effect savings which alone might justify operation of the demonstration plant.

Retorting oil shale consists essentially of heating it to the point at which the kerogen will decompose or "crack," then condensing the resulting vapors. Practically, the process is much more complicated, so much so that despite the fact that production of shale oil has been going on for more than 100 years, demonstration plant officials are confident that the best methods devised to date can be considerably improved with respect to efficiency, economy of operation, and values of resulting products. More than 2,000 retorts and processes have been patented but only a few have actually been used in practice.

In general, retorting processes may be grouped into four major types: (1) those in which heat is applied externally to the wall of the retorting vessel and is transferred through the wall to the shale, such as the original Pumpherston (Scottish), Hayes, and Bergh (Swedish) retorts; (2) those in which heat is transferred to the shale from the combustion gases generated in the retort by burning carbon remaining on the shale after the oil has been driven off, for example, the N-T-U, Union, and Pintsch (Estonian) retorts; (3) those in which gases or liquids are heated outside the retort and then passed through the shale bed; examples are the Bureau of Mines Gas Flow, the Industrial method (Swedish), Klimov (Russian), counter-flow, G. P. (French), and Royster retorts; and (4) those in which hot solids are introduced into the retorting bed. The Standard Oil Development Company fluid-flow retort and the Bureau of Mines hot-solids-contact retort are examples of this type.

To produce sufficient quantities of shale oil for refining studies the bureau installed two N-T-U batch-type retorts that hold 40 tons of raw shale each. Meanwhile, experimentation is continually being carried out on pilot-plant models of other types of retorts to develop one or more processes that will produce shale oil economically. It appears probable now that some form of continuous flow retort that is capable of high capacity will be used for commercial production.

Among those that show commercial possibilities are the Standard Oil Development fluid-flow; the Union Oil retort, which is a continuous adaptation of the N-T-U; and the Bureau of Mines gas-flow retort. Each of these has individual advantages. The Standard Oil Development process produces fuel gas as a by-product and handles quantities of shale rapidly; the Union Oil retort uses cold raw shale to condense the vapors; consequently, needs no additional condensing equipment, and thus reduces initial and operating costs. The gas-flow process produces fuel gas as a by-product and obtains a high yield of oil. About 1,200 cu. ft. of 350 B.t.u. gas per ton of shale may be produced and should add to the income of a shale-oil plant, thus reducing the costs of the principal products.

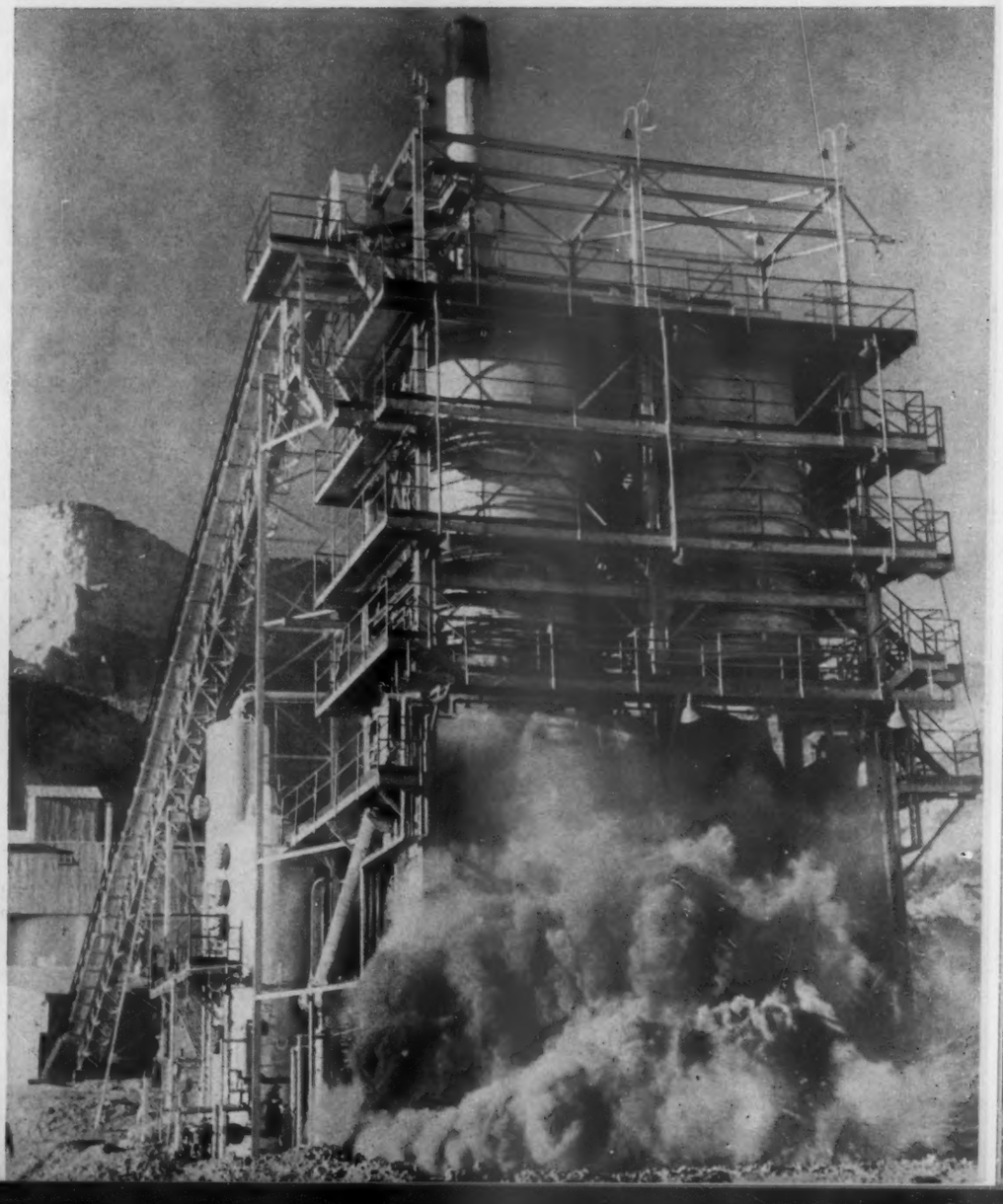
Crude Shale Oil—$1.50 per Barrel

Estimates based on data obtained by demonstration plant operation indicate that oil can be produced from the 30-gallon-per-ton shale in a 10,000-barrel-a-day plant for a net cost of around $1.50 per barrel. This includes all operating costs of the mining, crushing, and retorting plants and all costs of maintenance, depreciation, property taxes, and insurance but does not include any return on capital investment, profit, or income taxes. Anyone who cares to build a shale-oil plant can obtain the required information and data from the Bureau of Mines together with technical information to operate it, but he'll have to find for himself some $17½ million to build it. This is the estimated capital expenditure for a 10,000-barrel-a-day plant.

Such a plant would produce crude shale oil, a product similar in appearance to crude petroleum, suitable for firing a boiler, but of little use otherwise. In order to obtain jet fuel, Diesel fuel, or gasoline, it is necessary to refine the product of retorting. The oil, although resembling crude petroleum in some ways, differs considerably with respect to composition and characteristics. This complicates the refining problem. If shale oil could be piped or hauled to existing refineries and processed along with crude petroleum, chances are some Diesel locomotive fuel tanks would already be filled with the product. But shale oil cannot be processed in exactly the same way as petroleum. Some petroleum refining processes can be modified or adapted to shale-oil processing but others do not seem to be suitable. Specialized methods of refining shale oil are being developed.

The initial refinery installation at the Oil-Shale Demonstration Plant consists of a 200-barrel-per-day thermal cracking plant and a chemical treating plant. Octane numbers of the raw cracked gasoline range from 62 to 69; treating and leading increases this to about 75. Finished

Inside the oil shale mine. The electrically operated 3-yd. shovel loads shale into a 15-ton Diesel-powered dump truck. On the upper level is a mobile compressor station for providing air and water under pressure for pneumatic drills



Unloading spent shale from the retorts. Each of these two N-T-U retorts holds 40 tons of oil shale. In operation, a fire is started on top of the shale bed. A centrifugal blower creates a down draft forcing the hot combustion gases downward heating the shale below the burning zone to a temperature sufficient to drive off the oil as vapors. A small amount of carbon remaining on the retorted shale furnishes sufficient fuel for the downward moving fire bed. At the end of a run the hinged bottom of the retort is opened to unload the spent shale

Diesel fuel produced in the experimental refinery has a cetane rating of 47 after treating, and as indicated at the beginning, shows better performance in use than the cetane rating would indicate.

The principal differences between petroleum crude and shale-oil crude that affect the refining problem are: shale oil contains high percentages of olefins, aromatics, compounds of sulphur, nitrogen, and oxygen and low percentages of paraffins and naphthenes as compared to the natural crude. The high percentage of nitrogen, about 2 per cent, makes it impractical at present to use catalytic cracking as is commonly used in petroleum refining to produce high quality gasoline. Cracking catalysts now in use are soon deactivated by nitrogen compounds and must be regenerated after short periods. For this reason, the refinery was designed to use thermal cracking methods. The unit is flexible in design and can be used to carry out all of the conventional thermal refining processes.

Hydrogenation, a type of processing not ordinarily used in the petroleum industry, appears to be well adapted for refining shale oils, particularly since the development of new catalysts that makes it possible to add hydrogen to shale oil and its distillates at comparatively low pressures, under 2,000 lb. per sq. in. Previous methods used in the production of oil from coal required pressures up to 10,000 lb. per sq. in. at temperatures from 800 deg. F. to 1,000 deg. F. Mild hydrogenation, as the lower-pressure process is known, of the whole crude raises the gravity to about 30 deg. A.P.I., reduces percentages of nitrogen and sulphur, and increases the gasoline fraction. It is possible to combine thermal refining and hydrogenation and it is thought that this may eventually solve the problem of further reducing costs of finished products from shale oil.

Anyone having a supply of shale oil on hand or a plant producing it will need a refinery. Supposing that he wants to build a 10,000-barrel-a-day refinery using a combination of coking and mild hydrogenation; the only thing he needs to worry about is a matter of about $24 million; the other details may be obtained from the bureau. The operating costs would be about $14,000 per day. From the 10,000 barrels of crude oil charged daily, the refinery will yield 5,150 barrels of jet fuel, 3,350 barrels of Diesel fuel (of even better quality than that discussed previously), 340 barrels of fuel oil, 27 tons of anhydrous ammonia, and 62.6 tons of coke per day, and quite a few by-products that have not been evaluated. The jet fuel would be of interest for national defense uses but in peacetime could be converted to gasoline by additional refining at a small additional cost. The net cost of refining would be about $1.40 per barrel of crude shale oil. Adding that to $1.50 per barrel for mining, crushing, and retorting gives a total cost of $2.90 a barrel for the crude oil. Liquid fuels produced would total 8,840 barrels costing $3.30 per barrel.

Now if you want to make a profit it is necessary to add sufficient margin to provide for income taxes and return on investment.

These figures include only liquid fuels, ammonia, and coke as salable products from the refinery. They do not include income from other by-products. It is estimated that in a 10,000-barrel-per-day plant the shale gas produced could supply synthesis gas to yield 600 to 700 barrels of Fischer-Tropsch product in addition to enough hydrogen required for mild hydrogenation. In addition to liquid fuels, the Fischer-Tropsch process would yield organic chemical products such as acetone, propionic acid, methyl ethyl ketone, and acetaldehyde. Some wax and other by-products of marketable value might also be obtained. Lubricating oils and greases have not been mentioned, because none are produced from shale oil; it is expected that in the foreseeable future all lubricants will continue to come from petroleum.

As it now stands, commercial production of liquid fuels from shale oil at a price comparable to that of petroleum products is close to achievement. A few slight changes could make the difference—reduction in costs of shale-oil production and processing which appears quite probable; increased cost of petroleum production which doesn't seem immediately probable but is expected eventually; additional returns from by-products obtained from shale oil, the possibilities of which, up to the present, have not been intensively nor extensively explored; and the event of a war.

Regardless of how soon or how long it may be, it is obvious that commercial production of shale oil eventually will become a reality. It is comforting to know that there's oil in "them thar hills"; billions of barrels of it, and thanks to the Bureau of Mines experimental oil-shale plant at Rifle, we know how to obtain and process it at a cost that in an emergency would not be prohibitive.

Maybe the country doesn't need the oil now but the day is coming when it will be needed, maybe seriously needed, and the knowledge of how to produce and process it will be of untold value. Every few years for the past hundred someone in a position to know has "hollered" that we are running out of oil. Each time, new oil fields have been discovered, but as it was with the boy who yelled "wolf," the cry some day will be true.

Anyway, you can stop worrying about where the fuel is coming from for the Diesel-electric locomotives.

The water pumping station for the Bureau of Mines Oil Shale Demonstration Plant near Rifle, Colo. The electric transmission line, the highway, railroad, and Colorado river combine to provide facilities needed for operation of the plant and influenced selection of the location

The Collinwood yard (Cleveland, Ohio) subcommittee making yard observations after a regular session in the office of the general yardmaster

Better Switching Campaign Gets Down To Grass Roots

Work of local committees brings results on the New York Central—Special bulletins and pamphlets issued — Grade changes made in yards

The management of the New York Central, fully realizing the damaging effect that rough handling has on freight—and the possible loss of traffic that may result from that damage—has set up its own better switching campaign, designed to reach the men who do the switching and the local supervisory forces. This program is based on the assumption that better switching can be achieved only if the local forces appreciate the importance of and take an interest in doing a better job. Thus, while divisional committees (for each operating division) have been set up, the main reliance for reducing rough handling is placed on the local committees at the various yards and terminals on the system. Although rough handling has not been eliminated, the road's officers are confident that substantial progress has been made and that the practice is not as prevalent as it was a year or more ago.

Each of the local committees meets monthly. Reports of rough handling are investigated, and corrective action is taken when and if responsibility can be developed. Every week the committee observes the switching in the yard over which it has jurisdiction, pointing out to of-

"Cutting Them Off!"

NEW YORK CENTRAL SYSTEM

Vol. 1 | August 24, 1950 | No. 5

HASTE MAKES WASTE!

Nothing new in that expression. It is older than any of us—yet as true today as when it was first coined.

We've got a job, on this railroad, to deliver freight promptly. We have set up schedules to do just that ———— schedules we can meet consistently and, believe it or not, there isn't one of them where "rough handling" is necessary to accomplish the job. Certainly we don't meet "schedule" when we dump a lot of damaged freight on the doorstep of a consignee, even if we are on time.

You know some of our people like to throw in the speed angle as an excuse for rough switching. We can't get away with that among either shippers or railroadmen. Can you imagine the mass producer of radio, or any commodity, trying to tell the public that his radios don't perform properly because he has to produce them too fast?

UNNECESSARY HASTE MAKES WASTE. Ask the brewery representative who had ten cars with damage out of the last eleven received. In one car he had 263 cases broken ———— Ask the materials dealer who said—"Everything must have broken loose in July. Every car of sewerpipe or tile had heavy breakage—shot to pieces".———— Ask the newspaper publisher in a large city who reported—"twice as much damage in July due to rough handling." Ask any one of the many patrons who complained or many who had a real gripe but held off, and any one of them will tell you that SERVICE of that kind makes WASTE.

Good railroaders say—proper planning will "meet schedules" WITHOUT rough switching and WITHOUT delay.

A POINT TO CONSIDER

Some of our yards are producing a much better grade of handling; obviously some others are not. Where does your yard stand? Is it undoing the fine effort of others, or is it on the band wagon?

Looks like a good personal point to consider —— don't you think so?

"Cutting Them Off" is issued monthly to all personnel who have anything to do with the handling of cars

COMPOSITION OF COMMITTEES

Special Divisional Careful Car Handling Committee

Superintendent (chairman)
Assistant superintendent
Trainmasters
Division engineer or representative
Master mechanic or representative
Special representative property protection

Yard Subcommittee*

Trainmaster in charge of area (chairman)
General yardmaster
Yardmasters
Representative of maintenance-of-way and equipment department

Yard Subcommittee*

Trainmaster in charge of area (chairman)
General yardmaster
Yardmasters
Representative of maintenance-of-way and equipment department

* The number of subcommittees will depend on the number of yards to be covered in program. The same trainmaster may be chairman of more than one subcommittee, depending on the number of yard locations in his area. Normally each large yard is the responsibility of a separate subcommittee.

fenders bad practices observed and making recommendations for correction. Each week also, all train and engine crews are reached so that the subject is kept before the men at all times. During these sessions data and facts of interest to the man on the ground are disseminated.

At monthly meetings progress reports are made to the divisional committee as are recommendations for changes—in yard physical layout, etc.—which may contribute to elimination of rough handling.

Divisional committees meet twice a month to review and discuss the general program and the reports and recommendations of the local groups. Each quarter, this committee, as a committee, observes activities in all the larger yards. Observations made during these inspections frequently lead to recommendations to the local committees. It is the responsibility of the divisional group to keep the regular divisional loss and damage prevention committees informed of its actions, just as it is also the job of this group to keep the general manager informed of any action taken which may affect the overall program, especially if the action deemed necessary needs an authorization for expenditure.

While rough handling continues to be a formidable obstacle to overcome in order to provide better transportation service, the New York Central has evidence that progress is being made in that direction. As an outcome of the studies and recommendations of these committees the grades in several yards are being changed and benefits already are apparent. As one officer has stated, "the rough handling curve has been blunted somewhat, although it's still too high to suit us. But we're doing better and we intend to keep up the effort."

New Book . . .

THE IOWA POOL, by Julius Grodinsky, 184 pages, illustrations. 9¼ in. by 6 in. Bound in cloth. Published by the University of Chicago Press, Chicago 37. $4.

A brace of paragraphs in this book sum up the story it tells:

"The decade of the Seventies opened. A battle seemed certain among the three companies controlling the Chicago-Omaha route [Burlington, North Western and Rock Island]. They were substantially similar in mileage and in the quality of their service. A rate war threatened, similar to, or identical with, those which had caused so much damage in eastern territory.

"That war never occurred. An arrangement without precedent, completely informal and unwritten, prevented all that. This was the Iowa Pool. The through railway systems agreed to divide the business and thus to preserve rates; for, when the business was thus shared, there could, theoretically, be no incentive to reduce them. Railway pooling constituted a significant phase in the evolution of business competition in a free economy. The 'Great Pool,' as the Iowa Pool came to be known in many quarters, was the envy of the railroad world. Its success spurred the formation of many others in all sections of the country. Strangely enough, the Iowa Pool weakened and disappeared at the very time when new pools were organized and old ones strengthened."

One of the great men of the pool was J. F. Joy of the Burlington; curiously enough he had as much trouble keeping "Q"-financed subsidiary lines in step as he did the system's outside competitors. J. F. Tracy, who headed both the C. & N. W. and the C.R.I. & P. at one time or another, was his chief opponent in the high strategy, yet joined him in making the pool work. The strength of the Iowa Pool came to the real test when Jay Gould got control of the Union Pacific and certain connecting lines by which he could divert transcontinental traffic at will. He and the pool played "on-and-off-again-finnegan" with tedious monotony, until, toward the end of the Seventies, Gould led a full-cannon assault on the members—chiefly the Burlington. The result was that, despite J. M. Forbes' innate dislike of expensive expansion into other people's territory, the opposition's tactics and the urging of tough-minded C. E. Perkins drove the Burlington to build important new lines, including the Denver line, all of which made the "Q" so strong that the cooperation of equals in the pool was no longer possible.

In operation, the pool was a machine difficult to analyze, but potent in result. "While the competitive forces swirled in all directions, the Pool roads continued to function as members of an organization which, in its informality, flexibility, and tentative—almost experimental—nature, was unprecedented in American business history."

The pool, of course, was a means to control rate-cutting only on through business. The members continued to compete vigorously for local and regional traffic, not only by actual service, but by the more significant encouragement of market competition. These forces grew to the point where the pool "was unable to retard the free play of competitive influences." In 1884, about when pooling in other sections of the country became important, the Iowa Pool, first and most successful, passed into history.

As in his fine study of railroad consolidation, Dr. Grodinsky has the knack of making deep and original scholarship interesting reading as well. The great beauty of this book is that, for the first time, it brings to light — in logical, interpretive order — a mass of memos, letters, contracts and reports by officers of the member roads and their competitors. The net effect, on this reviewer at least, is to dispel any idea that attempts at "understanding" between railroads to prevent suicidal rate competition succeeded in creating monopolies or hindered in any respect the real growth, long-term reductions in rates or competition in service which built the Middle West.

The Baldwin-Westinghouse Standard Line

Eight Diesel-electrics of five types meet a wide range of regular and special service requirements—Engines redesigned—Electrical capacity increased

The Baldwin Locomotive Works has developed a line of Baldwin-Westinghouse locomotives the units of which have increased flexibility and improved hauling capacity. These improvements, together with the changes which provide greater availability through improved access for maintenance, constitute the first major revision of all models of locomotives of this builder since the end of the war.

This major revision includes increased horsepower for traction and increased tractive force ratings at continuous rating speeds. It also covers the modifications of the individual locomotives to include new engineering developments directed principally toward increased dependability, simplicity and ease of maintenance. The primary feature of this major revision is the high degree of interchangeability between the new and existing models of locomotives, permitting owners of the latter to take advantage of the improvements.

The Engine

The new line now includes 800- and 1,200-hp. yard switchers; 1,600-hp. "all service" locomotives in four- or six-wheel, four- or six-motor types; a 2,400-hp. road transfer locomotive, and a 1,600-hp. road freight locomotive in A and B units which can be operated in multiple to form 3,200-hp., 4,800-hp., or 6,400-hp. freight locomotives. The tabulation shows the general characteristics of each unit of the new line.

Engine changes made to assure reliability and performance at the higher horsepower affect the bedplate, crankshaft and bearings, connecting rods, frame and turbocharger.

The crankshaft has been increased in size at both the main and crankpin journals and has been counterweighted and dynamically balanced to ensure a vibration-free assembly. The web thickness has been increased and rigidity improved by virtue of more overlap between crankpin and main journals. Interchangeability of the old and new shafts has been effected by utilizing thin "strip-process" copper-lead bearings.

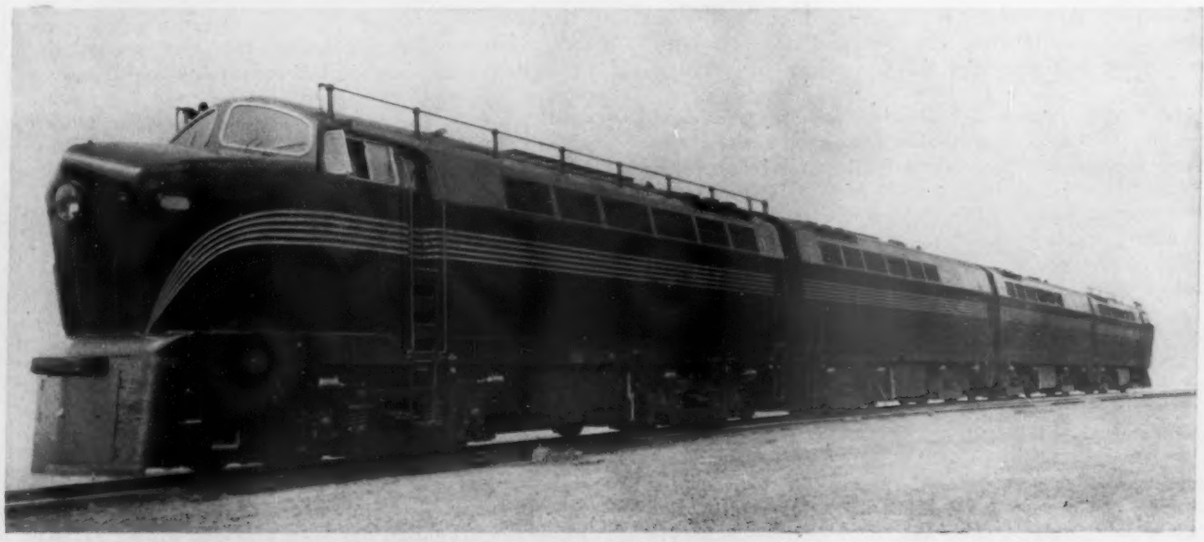
The new turbocharger will operate at a higher blower pressure. Capacity has been increased to maintain full engine horsepower output at altitudes up to 8,000 ft.

The bedplate stiffness has been increased; stressed members of the main frame are now made of alloy steel. The connecting rods are of increased section and are matched in weight.

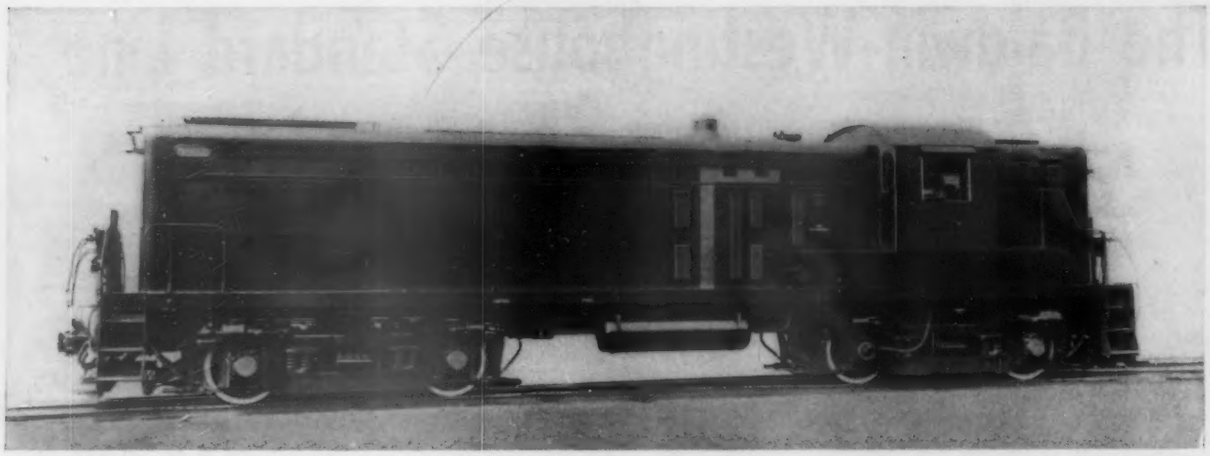
The majority of these changes have been in test operations for some time on selected railroads and have proved their merit.

Electrical System

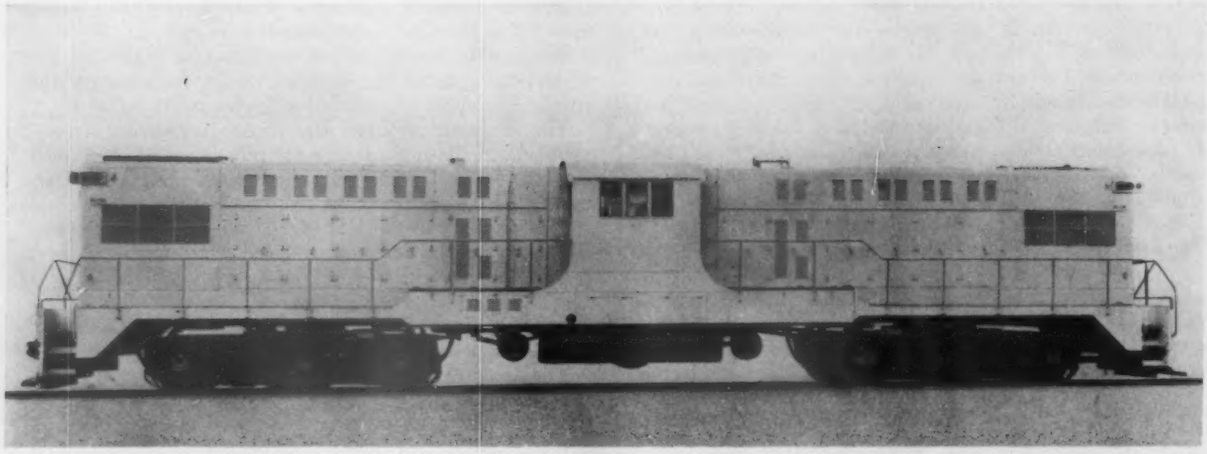
The second major improvement in the Baldwin-Westinghouse locomotives is in the electrical system. Continuous tractive-force ratings have been increased an average of 23 per cent. Maximum motor operating speeds have been increased, while a new gear ratio has been introduced in all models, except switchers, to fur-



A 6,400-hp. road freight locomotive made up of two A and two B Model RF-16 units



One of the 1,600-hp. "all-service" models, with four-wheel trucks



The 2,400-hp. road transfer locomotive with two 1,200-hp. power plants, six-wheel trucks, and six traction motors

ther improve their capacities and capabilities. These new features increase hauling capacity and, together with the increase in horsepower, allow accelerated operating schedules.

The load regulator has been completely redesigned and incorporates a commutator with fixed resistors, to assure reduced maintenance and little or no adjusting.

New positive four-step field shunting has been provided on "all-service" and road-freight locomotives by the addition of only one piece of apparatus. It is actuated by cams and eliminates any possibility of cycling. To the AS-616 locomotive has been added the option of shunting out two traction motors, maintaining the horsepower-speed characteristic of a four-motored locomotive but permitting operation with six motors when handling heavy tonnage trains.

Fuses on the new locomotive models have been eliminated and replaced with circuit breakers.

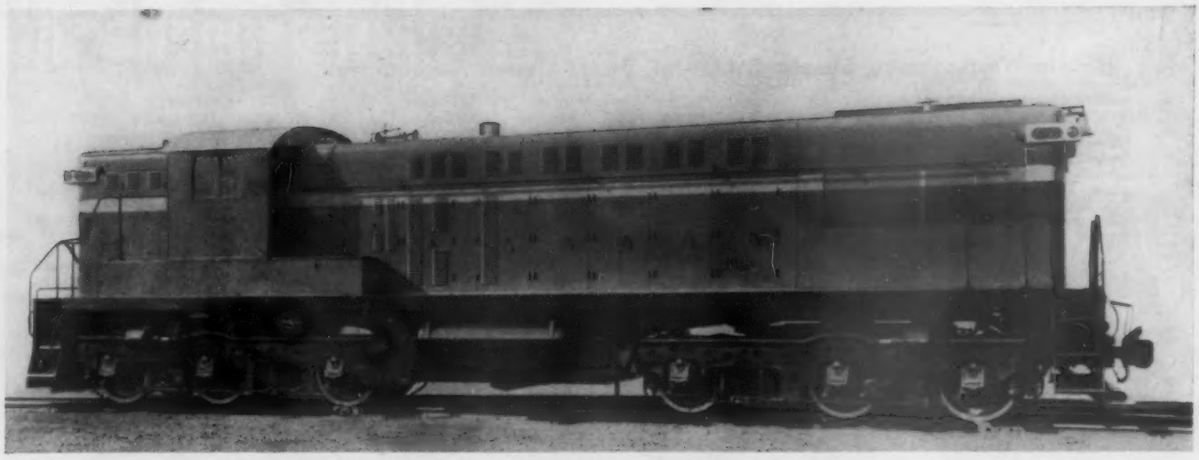
The pneumatic throttle has been retained. This gives step-free acceleration without the necessity of making manual changes at predetermined speeds or of providing special equipment to effect the speed changes automatically.

Improvements in the locomotive construction have been made with an eye toward increased accessibility for maintenance, increased dependability and improvement in operating conditions for the crew. Among the outstanding improvements in the design of all models of locomotives are new underframe designs utilizing structural shapes and a minimum of plates. Inherent in this design is increased rigidity, strength and the flexibility to vary the weights on units when required for special operations.

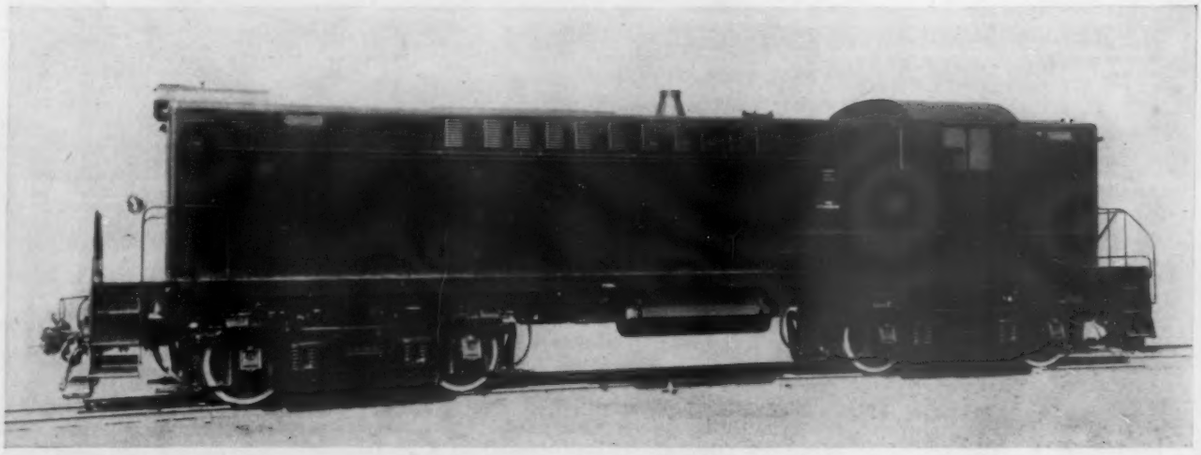
Locomotive Construction

Thermostatic control of the radiator fans has been modified by providing a pneumatic step-type controller in place of earlier individual pneumatic switches thus maintaining correct engine operating temperatures in positive sequence.

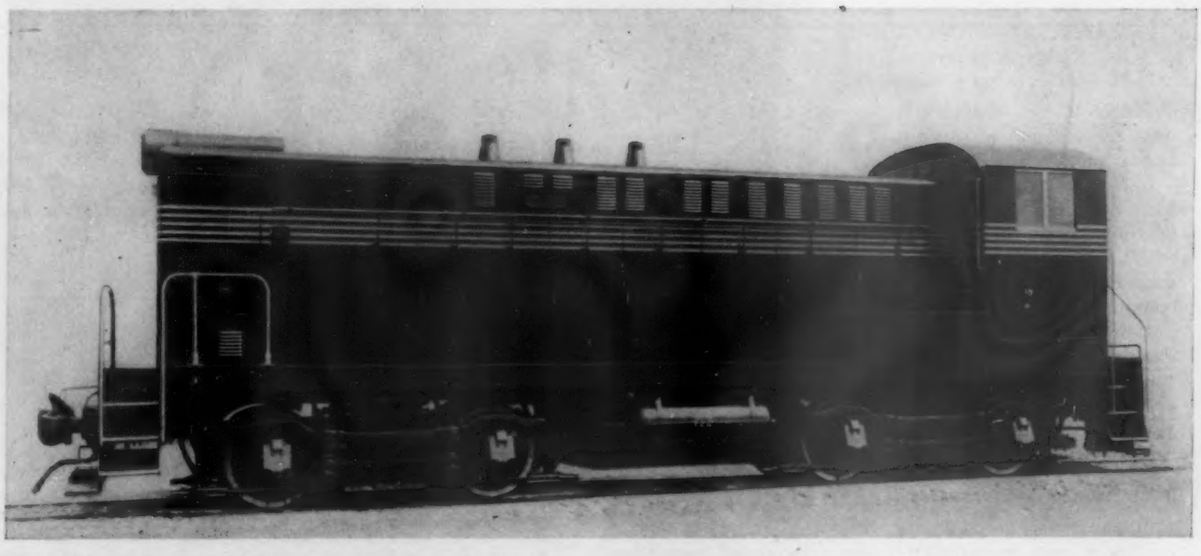
The cab arrangement of the new road freight locomotive has been modified in keeping with the trend toward neater appearance and improved functional arrangement. Black lighting has been provided for all gages on the road-freight locomotives and the cab nameplates are



A 1,600-hp. "all-service" model with six-wheel trucks and six traction motors



The 1,200-hp. road switcher



The 800-hp. yard switching locomotive

The Baldwin-Westinghouse Standard Line of Diesel-Electric Locomotives

TYPE	ROAD FREIGHT		ALL SERVICE		TRANSFER		SWITCHERS	
Horsepower	1600 h.p. (A or B unit)		1600 h.p.		2400 h.p.		1200 h.p.	800 h.p.
Model	RF-16	AS-16	AS-416	AS-616	RT-624	RS-12	S-12	S-8
PERFORMANCE:								
Tractive force (30 percent adh.)	73,800 lb.	70,800 lb.	52,200 lb.	97,500 lb.	106,200 lb.	67,200 lb.	72,000 lb.	59,550 lb.
Tractive force (25 percent adh.)	61,500 lb.	59,000 lb.	43,500 lb.	81,250 lb.	88,500 lb.	56,000 lb.	60,000 lb.	49,625 lb.
Continuous tractive force	52,500 lb.	52,500 lb.	52,500 lb.	78,750 lb.	78,750 lb.	32,400 lb.	34,000 lb.	34,000 ib.
Continuous speed	9.2 m.p.h.	9.2 m.p.h.	9.2 m.p.h.	6.0 m.p.h.	9.2 m.p.h.	11.4 m.p.h.	10.8 m.p h.	6.8 m.p.h
Maximum speed	65 m.p.h.	65 m.p.h.	65 m.p.h.	60 m.p.h.	60 m.p.h.	60 m.p.h.	60 m.p.h.	60 m.p.h.
Gear ratio	15:68	15:68	15:68	15:68	15:68	14:68	14:68	14:68
Optional gear ratios	15:63 — 17:62 — 19:60	15:63 — 17:62	15:63	15:63	15:63	.....	.....	.....
Min. rad. curve (with train)	273 ft. (21 deg.)	191 ft. (30 deg.)	260 ft. (22 deg.)	260 ft. (22 deg.)	260 ft. (22 deg.)	191 ft. (30 deg.)	130 ft. (44 deg.)	130 ft. (44 deg.)
AVER. WEIGHTS — STD. UNITS:	A unit lb.	B unit lb.						
Loaded	248,000	244,000	236,000 lb.	252,000 lb.	325,000 lb.	354,000 lb.	224,000 lb.	240,000 lb.	198,500 lb.
On drivers	248,000	244,000	236,000 lb.	174,000 lb.	325,000 lb.	354,000 lb.	224,000 lb.	240,000 lb.	198,500 lb.
Per axle	62,000	61,000	59,000 lb.	43,500 lb.	54,167 lb.	59,000 lb.	56,000 lb.	60,000 lb.	49,625 lb.
Light	234,100	229,500	222,800 lb.	238,800 lb.	304,700 lb.	332,500 lb.	211,400 lb.	229,200 lb.	187,700 lb.
DIMENSIONS:								
Width	10 ft. 6 in.	10 ft. 0 in.	10 ft. 0 in.	10 ft. 2 in.	10 ft. 2 in.	10 ft. 0 in.	10 ft. 0 in.	10 ft. 0 in.
Height	15 ft. 0 in.	14 ft. 0 in.	14 ft. 0 in.	14 ft. 1 in.	15 ft. 4¼ in.	14 ft. 0 in.	14 ft. 0 in.	14 ft. 0 in.
Length (inside knuckles)	(A) 54 ft. 8 in. (B) 53 ft. 2 in.	58 ft. 0 in.	58 ft. 0 in.	58 ft. 0 in.	74 ft. 0 in.	58 ft. 0 in.	46 ft. 0 in.	46 ft. 0 in.
Truck wheel base	9 ft. 10 in.	9 ft. 10 in.	11 ft. 6 in.	13 ft. 0 in.	13 ft. 0 in.	9 ft. 10 in.	8 ft. 0 in.	8 ft. 0 in.
Total wheel base	38 ft. 0 in.	42 ft. 1 in.	43 ft. 9 in.	44 ft. 6 in.	54 ft. 9 in.	42 ft. 1 in.	30 ft. 8 in.	30 ft. 8 in.
Wheel diameter	42 in.	42 in.	42 in.	42 in.	42 in.	42 in.	40 in.	40 in.
SUPPLIES:								
Lube oil	200 gal.	200 gal.	200 gal.	200 gal.	340 gal.	170 gal.	170 gal.	165 gal.
Fuel oil	1,200 gal.	900 gal.	900 gal.	1,900 gal.	1,500 gal.	900 gal.	650 gal.	650 gal.
Engine cooling water	(A) 300 gal. (B) 370 gal.	300 gal.	300 gal.	300 gal.	500 gal.	250 gal.	250 gal.	250 gal.
Sand	16 cu. ft.	30 cu. ft.	30 cu. ft.	30 cu. ft.	45 cu. ft.	30 cu. ft.	30 cu. ft.	30 cu. ft.
CAB AND RUNNING GEAR:								
Truck type (swivel)	Swing bolster	Swing bolster	Swing bolster	Rigid bolster	Rigid bolster	Swing bolster	Rigid bolster	Rigid bolster
Journal bearings	Roller, 6½ in. x 12 in.	Friction, 6½ in. x 12 in.	Friction, 6½ in. x 12 in.	Friction, 6½ in. x 12 in.	Friction, 6½ in. x 12 in.	Friction, 6½ in. x 12 in.	Friction, 6½ in. x 12 in.	Friction, 6½ in. x 12 in.
Foundation brake	Clasp, each wheel	Clasp, each wheel	Clasp, end wheels	Single shoe, ea. wh.	Single shoe, ea. wh.	Clasp, each wheel	Clasp, each wheel	Clasp, each wheel
DIESEL ENGINES (625 r.pm.. at Full Load)	1 8-cyl., sup-erch.	1 8-cyl., sup-erch.	1 8-cyl., sup-erch.	1 8-cyl., sup-erch.	2 6-cyl., sup-erch.	1 6-cyl., sup-erch.	1 6-cyl., sup-erch.	1 6-cyl., n.a.
ELECTRICAL EQUIPMENT:								
Motors (Westing-house)	4 Type 370	4 Type 370	4 Type 370	6 Type 370	6 Type 370	4 Type 362	4 Type 362	4 Type 362
Generators (West-inghouse)	1 Type 471	1 Type 471	1 Type 471	1 Type 471	2 Type 480	1 Type 480	1 Type 480	1 Type 480
AUXILIARIES (standard):								
Radiator fans	2 Motor-driven	2 Motor-driven	2 Motor-driven	2 Motor-driven	4 Motor-driven	1 Belt-driven	1 Belt-driven	1 Belt-driven
Traction-motor blowers	2 Belt-driven	2 Belt-driven	2 Belt-driven	2 Belt-driven	2 Belt-driven	2 Belt-driven	2 Belt-driven	2 Belt-driven
Compressor	3-cyl., 2-stage	3-cyl., 2-stage	3-cyl., 2-stage	3-cyl., 2-stage	2 3-cyl., 2-stage	3-cyl., 2-stage	3-cyl., 2-stage	3-cyl., 2-stage
BRAKES:								
Air	24-RL	6-SL	6-SL	6-SL	6-SL	6-SL	6-SL	6-SL
Dynamic	Modification	Modification	Modification	Modification	Modification	Modification	Not available	Not available
TRAIN HEATING EQUIPMENT	Modification on B units on special request	Modification	Modification	Modification	Not available	Modification	Not available	Not available

illuminated. On the switchers, road-transfer and "all-service" locomotives, indirect lighting by the use of Lucite rings has been incorporated.

Retained in the redesign of all models have been the features associated with Baldwin locomotives in the past: maximum fuel and water capacity, weight consistent with continuous tractive-force ratings, simplified associated auxiliaries and a minimum of electrically driven components.

Consideration has been given to deviations from the basic design to suit special conditions on railroads having special requirements. In the frame design of switcher and "all-service" locomotives, provision has been made to vary the locomotive weight. A modified dynamic brake has been incorporated on all models except the switcher. A desirable feature—maximum air-compressor capacity during periods of dynamic braking—affords the utmost in operational safety. Humping control is offered on all models, permitting locomotive speed regulation suitable for humping, weighing or heavy-grade starting.

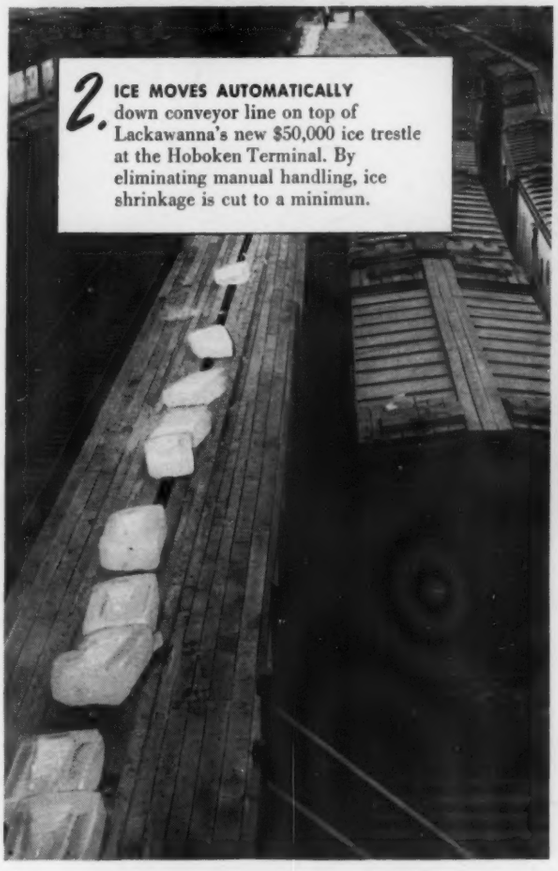
Certain features desirable for winter operation have been incorporated as standard while additional features desirable for unusually severe operations can be installed at minimum expense. These features, together with those regularly installed, result in a unit having high adaptability.

"Once again it becomes a matter of patriotism—as well as self-interest—to do the best job we know how: patriotism because railroad jobs very definitely back up this country's military efforts; self-interest because doing a good job can help shorten this tragic episode and lessen its painful consequences. Once again waste of every kind becomes an act against our country, our neighbors, and ourselves. Whether it be in the form of damage to freight, misuse of materials, or just plain inefficiency, waste by us is an aid and comfort to the enemy."—*G. Metzman, president, New York Central*

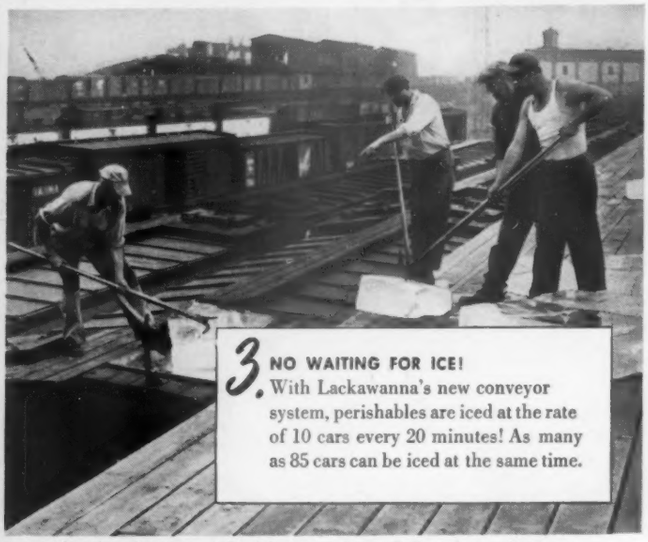
How to Ice Perishables

Quick as 1-2-3

1. OFF TO A FAST START...
In the Lackawanna Ice House, 325 lb. blocks of ice are placed on a conveyor that *automatically* carries the ice to top of icing trestle.



2. ICE MOVES AUTOMATICALLY
down conveyor line on top of Lackawanna's new $50,000 ice trestle at the Hoboken Terminal. By eliminating manual handling, ice shrinkage is cut to a minimun.



3. NO WAITING FOR ICE!
With Lackawanna's new conveyor system, perishables are iced at the rate of 10 cars every 20 minutes! As many as 85 cars can be iced at the same time.

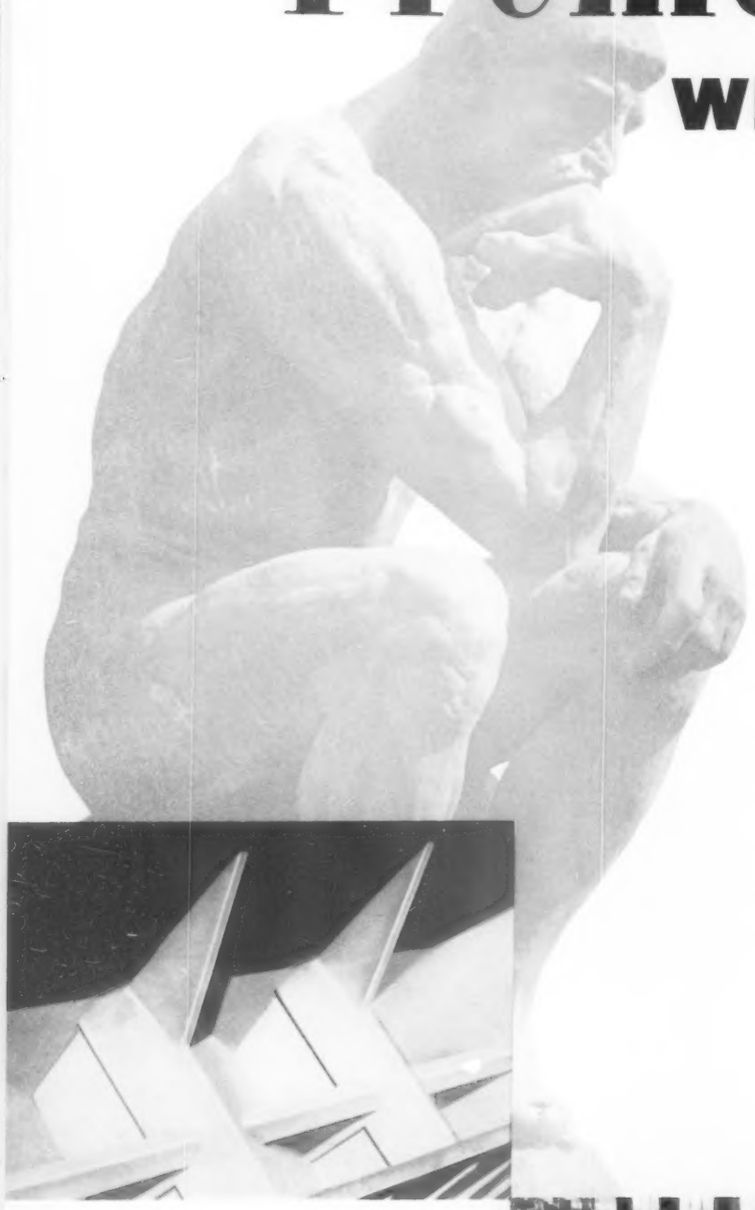
Whether it's perishables, packaged freight or heavy machinery, modern Lackawanna efficiency adds up to preferred handling for your shipments. That's why so many of the world's great shippers specify Lackawanna — to or through New York.

Lackawanna Railroad

SHIPPERS WHO ARE IN THE KNOW, CHOOSE THE ROUTE OF PHOEBE SNOW

Premeditated*

WITH A.C.F. FREIGHT CA



Peculiar way to tag profits?... but it makes sense when you consider that a Railroad is operated with intent to earn profits. And by consistent replacement of aging rolling stock with new cars, advantage is realized through increased economy of operation, lower maintenance costs, and longer service life. These and other advantages normally accrue with A.C.F.-built equipment.

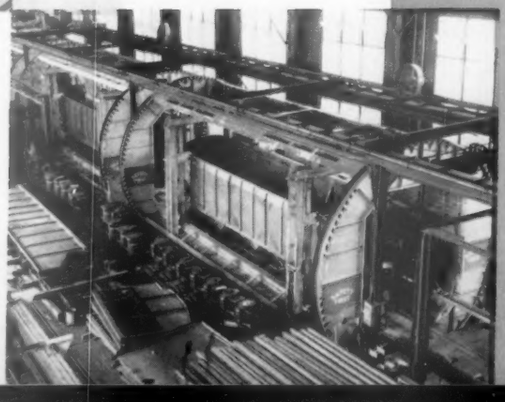
The Advantage of Buying over Building

With rising competition on every side, no Railroad can justify the investment necessary to duplicate A.C.F.'s modern car building facilities with its advanced fabrication methods. Building techniques, developed in the course of many years of teamwork with the Railroads, are unsurpassed in the industry.

A.C.F. facts on Freight Cars

- *Standardized design for lower maintenance cost*
- *Assembly-line fabrication*
- *Dimensional accuracy for guaranteed interchangeability*
- *Operating dependability-profitable life service*
- *Production speed for quick delivery*

There are no crevices to corrode, welding seals every seam tight against moisture. Faster dumping than ever before with extra large discharge openings—rounded corners.



Huge rotator jigs position a complete hopper car in several positions for final down hand welding.

CAR BUILDERS

*"*Planned in advance", says Webster*

Profits

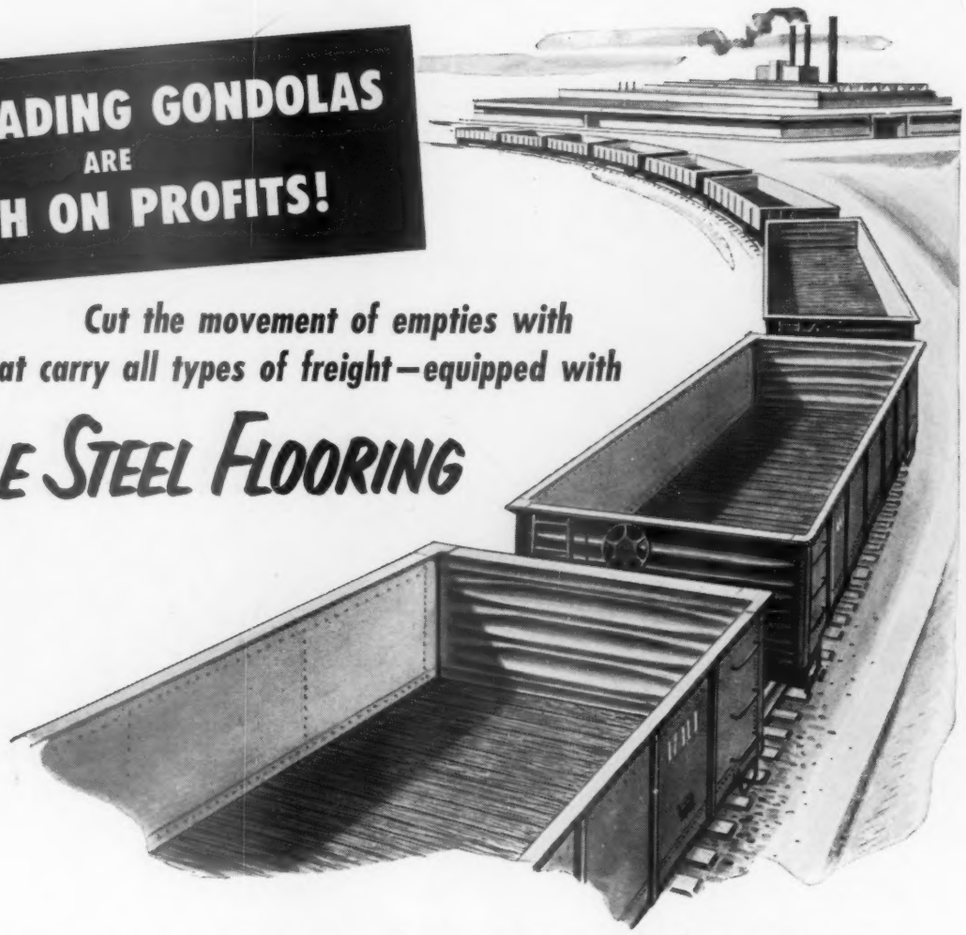
HT CARS

Premeditate on profits... discuss your freight car needs with an A.C.F. Representative. Practical purchase plans are available to facilitate the addition of new equipment *now*. American Car and Foundry Company, New York • Chicago • St. Louis • Cleveland • Philadelphia • Pittsburgh • Washington • San Francisco

E R S TO AMERICA'S RAILROADS

a.c.f.

DEADHEADING GONDOLAS ARE DEATH ON PROFITS!



Cut the movement of empties with gondolas that carry all types of freight—equipped with

NAILABLE STEEL FLOORING

You know the costs, and problems, of shifting *wood floor* gondolas from job to job... and of getting *steel-plate* floor gondolas from place to place. Such deadheading takes a whole lot of time and money.

NAILABLE STEEL FLOORING changes all that. Now, with N-S-F, the same gondolas that deliver *rough* freight—coal, pig iron, crushed stone—can carry away wood-blocked loads, skidded "floating" loads, or any other kind of open-top finished freight.

NAILABLE STEEL FLOORING makes this possible because (1) it's formed of tough, corrosion-resistant N-A-X HIGH-TENSILE steel that stands up under the roughest clamshell or magnet loading. Yet (2) NAILABLE STEEL FLOORING takes nails easily, holds them tight, and has an excellent surface for blocked or skidded loads.

All this benefits car supply and improves operations; when equipped with NAILABLE STEEL FLOORING, 500 gondolas can do the work of 700 to 800 wood floor or steel-plate floor gondolas. You can serve more shippers, faster, with less equipment!

When ordering new gondolas, or rebuilding old ones, be sure to specify NAILABLE STEEL FLOORING.

50-SF-10

PATENTS N-S-F HOLDS BLOCKING BETTER PENDING

A GREAT LAKES STEEL PRODUCT

GREAT LAKES STEEL CORPORATION

Steel Floor Division, Ecorse, Detroit 29, Michigan

NATIONAL STEEL CORPORATION

SAVE FLOORING WEIGHT • GAIN FLOORING STRENGTH

In a 52′ 6″ gondola, to attain floor strength equal to that of NAILABLE STEEL FLOORING—made of corrosion- and abrasion-resistant N-A-X HIGH-TENSILE steel—would require approximately 1,600 pounds more weight if plain carbon steel were used. In a 40′ 6″ boxcar, it would require 1,000 pounds more in plain carbon steel.

Railroads Under Government Operation

August 27 seizure by President Truman marked fourth time in seven years that strike and strike threats have brought federal control on nationwide basis — Seven railroad presidents, in roles of colonels, are regional directors — Donnell bill reported to the Senate

The nation's railroads were this week under government operation for the fourth time within seven years. President Truman took them over as of 4:00 p.m., Eastern Standard Time, on August 27, thus averting the nationwide strike which had been called for 6:00 a.m. August 28 by the Brotherhood of Railroad Trainmen and Order of Railway Conductors.

The strike call was generally interpreted as a maneuver to bring about government seizure, since B.R.T. President W. P. Kennedy and O.R.C. President R. O. Hughes had on August 4 recommended to President Truman that he issue a seizure order. To effect cancellation of the call, the union presidents sent this August 25 message to their general chairmen: "In keeping with the pledge contained in our telegram to the President August 4—'The men we represent will work for the government gladly under government operation of the railroads during this period of crisis until this dispute can be settled on its merits through mediation'—the strike instructions issued August 23 are postponed indefinitely."

The seizure plan was generally the same as that employed by the government on like previous occasions. The President's seizure order assigned the job of operating the railroads to the secretary of the army, Frank Pace, Jr. Mr. Pace designated Assistant Secretary Karl R. Bendetsen to act for him in carrying out the order. Six railroad presidents, who had been commissioned as army colonels to serve as regional directors during previous periods of army operation, were recalled to active duty and again assumed the same roles. A new colonel, Clark Hungerford, president of the St. Louis-San Francisco, was commissioned to serve as director of the Southwestern region. The other six are: Gustav Metzman of the New York Central, Eastern region; Roy B. White of the Baltimore & Ohio, Allegheny region; Ernest E. Norris of the Southern, Southeastern region; R. H. Smith of the Norfolk & Western, Pocahontas region; J. D. Farrington of the Chicago, Rock Island & Pacific, Central Western region; and Charles E. Denny of the Northern Pacific, Northwestern region.

Meanwhile, Assistant Secretary Bendetsen also announced that he had appointed the army's chief of trans-

portation, Major General Frank A. Heileman, as director of operations; and that Brigadier General Andrew F. McIntyre, wartime chief of the Transportation Corps' Railway Transport Service Division, is serving as executive to General Heileman. Luke W. Finlay, wartime executive officer of the Transportation Corps, is serving as consultant to Mr. Bendetsen.

The seizure order, issued August 25, was accompanied by a statement from President Truman who noted that the B.R.T. and O.R.C. had declined to accept findings and recommendations of the emergency board which passed upon their wage and rules demands. The President also called attention to that part of the seizure order which provides that, until further order of the President or the secretary of the army, the terms and conditions of employment in effect at the time of the seizure "shall continue in effect, without prejudice to existing equities or to the effectiveness of such retroactive provisions as may be included in the final settlement of the dispute between the carriers and the workers."

President's Statement

"In the strike situation confronting us," the President also said, "governmental seizure is imperative for the protection of our citizens. It is essential to the national defense and the security of the nation, to the public health, and to the public welfare generally that every possible step be taken by the government to assure to the fullest possible extent continuous and uninterrupted transportation service. Accordingly, I intend to take all steps necessary to assure the continued operation of the railroads.

"I call upon every railroad worker to cooperate with the government by remaining on duty. I call upon the officers of the railroad labor organizations to take appropriate action to keep their members at work."

In taking on his assignment under the President's order, Secretary Pace issued a statement saying he was confident that he could rely upon the cooperation of railroad labor, management, and the public. "Only through the united efforts of all our citizens can the national security be assured," Mr. Pace added. "We must not permit the flow of essential support to the forces in Korea to be interrupted." Subsequently, Assistant Secretary Bendetsen reported that labor and management representatives had assured him "of continued operation of the railroads without impairment of service."

As noted in the *Railway Age* of August 26, page 43, the strike call was announced by Messrs. Kennedy and Hughes on the evening of August 23, shortly after the break-up of conferences which the parties had been holding with John R. Steelman, assistant to President Truman. It came as a surprise to management representatives and to the White House. President Truman said at an August 24 news conference that the call had come very suddenly and unexpectedly after he had received definite assurances that there would be no walkout.

Deny Giving No-Strike Assurances

In an August 25 telegram to the President, Messrs. Kennedy and Hughes denied that they had given any such assurances. "We wish to personally advise you," the telegram said, "that at the concluding conference presided over by Dr. Steelman, no mention whatsoever was made regarding the calling of any nationwide strike, and therefore any statement to the effect that we had broken our pledge is one hundred per cent false."

The B.R.T.-O.R.C. demands in the case call for various changes in working rules applicable to road and yard service, and a 40-hr. week for yardmen with no loss in the take-home pay which yard employees now receive for 48 hrs. To meet this 48-for-40 yard demand, which has been pointed up as the principal issue, the railroads would have to grant a wage increase of about 31 cents an hour along with the 40-hr. week. The emergency board recommended that the wage adjustment in connection with the shorter week be 18 cents an hour, and it recommended withdrawal of most of the unions' road-service demands. (See *Railway Age* of June 24, page 84.)

The railroads accepted the board's report, and subsequently agreed to make further concessions which were suggested by Dr. Steelman in the course of the White House conferences. This Steelman proposal, which the unions rejected, would have given the yardmen an increase of 23 cents an hour, instead of 18 cents, and the roadmen five cents an hour, instead of no increase at all. It also included a provision to adjust wages every three months in accordance with changes in the cost of living.

While the President's seizure order was bottomed generally on the power and authority vested in him "by the Constitution and laws of the United States," it relied specifically on the Act of August 29, 1916, which authorizes the President to take over the railroads "in time of war . . . through the secretary of war." The order applied specifically to an attached list of roads, which included all of the principal lines as well as several terminal roads and short lines. There was also a provision authorizing the secretary of the army, if he deemed it necessary, to take control of "all or any part of any transportation system of any other carrier by railroad located in continental United States."

The Chicago, Rock Island & Pacific was not on the list. That road was already under army operation, having been seized by the President on July 8 to end a strike staged by the Switchmen's Union of North America which is pressing demands like the B.R.T. and O.R.C. yard demands.

Management to Carry On

As to operation of the railroads, the seizure order stipulates that the secretary of the army "shall permit the management of carriers whose transportation systems have been taken . . . to continue their respective managerial functions to the maximum degree possible consistent with the purpose of this order." The provision freezing wages and working conditions goes on to say that the secretary "shall recognize the rights of the workers to continue their membership in labor organizations, to bargain collectively through representatives of their own choosing with the representatives of the owners of the carriers, . . . and to engage in concerted activities for the purpose of such collective bargaining, provided that in his opinion such concerted activities do not interfere with the operation of the transportation systems taken hereunder."

Among other provisions of the order are those stipulating that operation of the seized roads "shall be in conformity with the Interstate Commerce Act, as amended, the Railway Labor Act, as amended, the Safety Appliance Acts, and other applicable federal and state laws." Also, the secretary is authorized to furnish protection for the railroad properties and their employees; and to furnish "equipment, manpower, and other facilities or services deemed necessary."

As to termination of government control, the order provides that Secretary Pace may bring it about whenever he determines that possession is "no longer necessary to carry out the provisions and to accomplish the purposes of this order." When that time comes, it is expected that settlements between the government and the carriers will on the same basis as those following the previous seizures of recent years, i.e., mutual releases from financial liability.

Fourth Seizure Since 1943

The latest previous period of government control and army operation was from May 10, 1948, until July 9, 1948. It resulted from a strike threat posed by the Brotherhood of Locomotive Engineers, the Brotherhood of Locomotive Firemen & Enginemen, and the Switchmen's Union. Two years earlier, in May, 1946, there was a 9-day period of government operation which included the two-day strike staged by the B.L.E. and B.R.T. Chairman J. Monroe Johnson of the I.C.C., in his former role of director of the Office of Defense Transportation, had the operating job at that time. During the period from December 27, 1943, to January 18, 1944, the carriers were operated by the secretary of the army's predecessor, the secretary of war. That seizure, by the late President Roosevelt, resulted from a strike threat by all of the so-called standard railroad labor organizations except the B.L.E. and B.R.T.

Conferences on the wage and rules dispute involved in the present B.R.T.-O.R.C. case have been suspended since the break-up of the White House meetings on August 23. Management representatives remained in Washington this week so that they would be readily available for any resumption of the negotiations. They called on Dr. Steelman at the White House on August 30, having sought the meeting with the Presidential assistant for the purpose of learning what future mediation proceedings were in prospect.

Among congressional reactions to the situation was that of Senator Morse, Republican of Oregon, who served as chairman of a 1941 emergency board. In an August 24 Senate speech, Mr. Morse said that the Senate committee on labor and public welfare should call before it "all parties to the dispute, including Dr. Steelman," and thus get "the facts." Mr. Morse told his colleagues not to assume that "all the wrong is on the side of the workers."

On August 25, the committee on labor and public welfare reported to the Senate, with an adverse recommendation, an amended version of the bill, S.3463, sponsored by Senator Donnell, Republican of Missouri, to make unlawful any strike or lockout arising out of a dispute within the purview of the Railway Labor Act. The committee had previously pigeonholed the bill by voting down motions to report it favorably, or without recommendation.

Truckers Were Getting Ready

The strike call brought from American Trucking Associations a statement by its managing director, John V. Lawrence. A.T.A., Mr. Lawrence said, had requested its affiliated trucking associations "to make an immediate survey of transportation problems posed by the rail strike threat," with particular reference to "defense plants and other critical spots." While he promised that truckers would make "whatever adjustments may be indicated," Mr. Lawrence conceded that the motor carriers could not take over the volume movement of basic commodities.

"It must be understood," he said, "that long-distance hauling of certain freight, including coal, ore, and heavy steel, is essentially rail-type traffic just as much manufacturing and consumer traffic is truck-type hauling. Our transportation facilities are not completely interchangeable in this country and serious dislocations must be expected any time any form of transport service stops."

THE PRESS LOOKS AT THE STRIKE

"Threat of a general railroad strike leveled at the nation by two railway unions is an example of selfish, unpatriotic and irresponsible union leadership which cannot be tolerated by the American people.

"The threat is a club held over the head of the government to force concessions that have not been obtained by normal processes of negotiation and mediation. It is a blow poised for delivery at the vitals of the nation's economy. It is an axe held ready to sever the supply lifeline to our troops in Korea.

"All these the two rail unions are ready to risk in order to gain a few cents or a few dollars for a fraction of the men employed on the nation's railroads."—*Philadelphia Inquirer.*

"The victim in this instance is not the railroads, but the government and the people of the United States.

"The only remedy is a new law forbidding strikes or lockouts growing out of any dispute falling under the Railway Labor Act. . . . Men who work for railroads are like policemen and soldiers; they are essential to the maintenance of order and to the national defense and they can't be permitted to quit work in a body. If they don't like their jobs, railroad men as individuals are free to seek others."—*Chicago Tribune.*

"Seizure itself really adds nothing to the true problem; and in forcing this to the proof the unions have rashly hastened the day when the question of both union and management responsibility in the vital industries will have to be more directly attacked."—*New York Herald Tribune.*

"Psychologically, a paralysis of the rails would clinch the argument of the Russians that our free system is on its last legs and encourage them to believe that one more Communist aggression would topple it."—*Washington Daily News.*

"There remains on the record—a black mark which the unions will take long to outlive—the fact that in a crisis of the nation's history, when its armed forces were undergoing a crucial and bloody test, two large groups of railroad workers announced that they would bring transport to a standstill if the government did not accede to their demands for seizure. The opprobrium that would be leveled against industry if it refused to produce until some interest of its own was satisfied can well be imagined; and labor will not be able to avoid a comparable discrediting. . . .

"As an expedient, seizure may be justified; as a practice regularly resorted to it has grave perils. The very fact that it appears so easy makes it the more dangerous, and should impel our public men to examine with renewed concern the whole problem of strikes in essential industries."——*New York Herald Tribune.*

"This week the leaders of the trainmen and conductors, with an ineptness that is difficult to credit, have succeeded in compounding irresponsibility with breach of faith. . . .

"With the nation launched on an emergency defense program of major proportions, steps must be taken to free the economy once and for all from these recurrent threats of a breakdown in its transportation system. The railroad workers themselves must realize, if they will consider the situation calmly, that their own interests demand that they remember and respect their responsibility to their fellow-citizens."—*New York Times.*

GENERAL NEWS

Aid in Getting Car Steel Assured

Johnson and Faricy say government will help

The railroads have received "assurances of governmental and industry assistance" in obtaining the steel for their enlarged car-building program, Chairman J. Monroe Johnson of the Interstate Commerce Commission and President William T. Faricy of the Association of American Railroads said in a joint statement issued after they had participated in an August 30 "car situation" conference which was called by the chairman of the Senate committee on interstate and foreign commerce, Senator Johnson, Democrat of Colorado. "In no other way could the same amount of steel, ton for ton, be used to create so much additional transportation capacity for national needs as by enlarging the freight car fleet," the Johnson-Faricy statement also said.

It attributed the existing shortage of cars to "the combination of a sharp increase in demand, a slight decrease in supply, and a serious loss of utilization of cars, principally because of the prevalence both in industry and on the railroads of the working week of five days instead of six." The increase in demand, it was explained, "is the result of increased military requirements, increased stockpiling and inventory buying, and increased consumer purchases."

The statement went on to note that there is also in the picture, as in previous years, the "complicating factor" of the movement of "much of last year's grain, which could have moved when box cars were in large surplus but which was held under government loan, so that now both old grain and the new crop have to be moved at the same time." Elevators in many terminal markets "are so nearly full that receiving operations are being slowed down, with a corresponding decrease in the utilization of cars," Messrs. Johnson and Faricy continued. They also pointed out that if it were possible to increase the number of cars loaded at country elevators, "the result would be congestion at the terminal markets."

The I.C.C. chairman and A.A.R. president predicted that the car shortages will be reduced "as the nation moves more and more toward the practices which were so successful in meeting the transportation requirements of World War II. But even so, and even if the railroads are successful in substantially increasing their supply of serviceable cars," they added, "there is every evidence that shortages will continue at least until after the autumn peak of loadings has been passed, and they may become worse before they are better."

Meanwhile, the statement had reviewed figures on car loadings and shortages, and called attention to measures being taken to improve operating practices and augment the car supply. As to those matters, it said in part:

Freight carloadings have risen in the eight weeks since the beginning of war in Korea from 783,367 to 851,025 per week, averaging 792,117, with an average reported daily shortage of 27,391.

Maximum Shortage 38,925

The maximum shortage so far reported was 38,925 in the week ending August 12 when carloadings were 847,465. In the following week, with loadings up to 851,025, which is the highest since November 1948, no increase in car shortage occurred; in fact, there was a slight decrease, the reported shortage being 38,691.

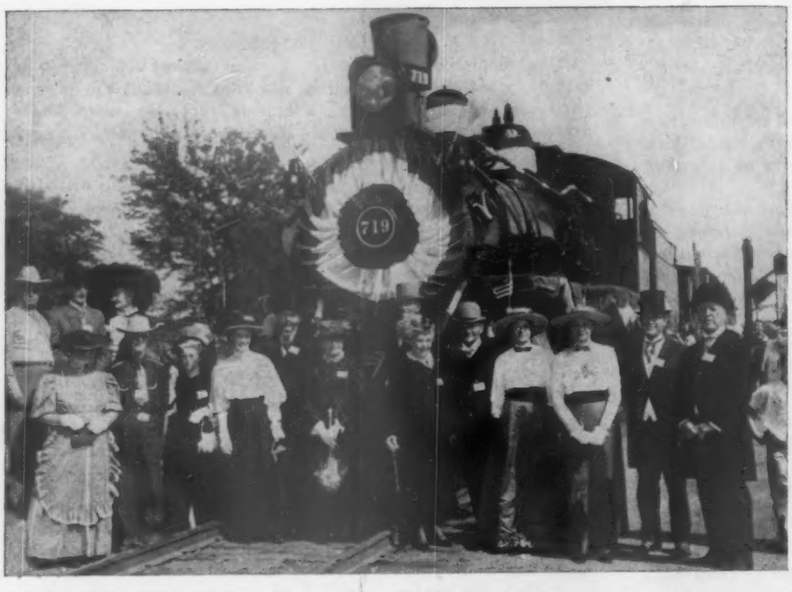
The car shortage followed a situation of large surplus freight car supply. In the corresponding weeks of July and August 1949, with carloadings averaging 697,792, the average surplus reported was 77,856. This surplus continued throughout the year 1949, reached a peak of 207,627 cars in February, 1950, due in substantial part to strikes in other industries, and did not fall below 10,000 until the middle of May, 1950.

With respect to the supply of cars, Mr. Faricy points out that as compared with a year ago, there are approximately 45,000 fewer freight cars available for service. Three causes, all stemming from the low state of railroad earnings and the large surplus of cars in 1949 and early 1950, have contributed to this condition, namely—a high rate of retirement of old cars; postponement of repairs on existing cars; a low rate of orders for new cars.

The railroads are moving energetically to increase the supply of serviceable cars.

The railroads are stepping up the rate of repair and rebuilding of cars. In February, 1950, when there was a surplus of more than 200,000 cars, the number of cars awaiting repair was 140,000. This was reduced to 123,000 by the end of July, and further reductions are continuing, as railroads expand their shop forces and extend their shop working time.

The railroads have moved to increase their car supply. At a membership meeting of the Association of American Railroads, on July 28, the railroads pledged as their goal a net increase of 122,000 cars. As a first step in that direction, orders have been placed or announced for more than 100,000 cars. More cars were ordered in July than in any one month in the past quarter of a century.



OF THE VINTAGE 1900 is this scene taken at Scottsbluff, Neb., during the town's recent golden jubilee celebration. The locomotive has brought to town a replica of the first Burlington train to reach the community coincident with its founding in 1900. Among those appropriately garbed for the event are Governor Val Peterson of Nebraska, Ernest L. Potarf, general manager-lines west, for the Chicago, Burlington & Quincy, and C. D. Peckenpaugh, retired vice-president of the Fort Worth & Denver City, who was a dispatcher at the time the line was built through the North Platte valley

Railroads are increasing supervision and improving their operating practices. The car Service Division is devoting all its efforts to securing an equitable car distribution among railroads and sections, such as will insure that the available supply of cars will be equitably distributed. At present, distribution is as well balanced as might be expected. It is estimated that the effect of the five-day week is about the same as if 175,000 freight cars had been withdrawn from service.

Senators attending the conference, in addition to Senator Johnson, included other members of the interstate commerce committee and non-member senators who were interested in the matter. Other participants, in addition to I.C.C. Chairman Johnson and A.A.R. President Faricy, included J. M. Hood, president of the American Short Line Association; Robert M. Drysdale, Jr., executive vice-president of the Federation for Railway Progress; Samuel M. Felton, president of the American Railway Car Institute; J. H. Aydelott, A.A.R. vice-president in charge of the Operations and Maintenance Department; J. Carter Fort, A.A.R. vice-president and general counsel; and Arthur H. Gass, chairman of the Car Service Division.

Johnson Calls Freight Car Situation Hopeless

I.C.C. chairman sees no relief from present shortage

Present freight car shortages were described by Interstate Commerce Commissioner J. Monroe Johnson as "more hopeless than any I've ever seen" when he appeared this week before a subcommittee of the House Committee on Interstate and Foreign Commerce.

Testifying before the House group, which is headed by Representative Beckworth, Democrat of Texas, the I.C.C. chairman declared "there is no relief for this car shortage, which is indescribable." He said it extends to every part of the United States, with mid-August shortages averaging around 38,000 cars a day.

Chairman Johnson was one of three witnesses who appeared before the subcommittee on the afternoon of August 29. Others were Commissioner Splawn of the I.C.C., and Representative Ellsworth, Republican of Oregon, and a member of the House Interstate committee. It was in connection with a bill, H.R.9480, introduced by Representative Ellsworth that the subcommittee was studying the freight car problem. This bill, which would provide for acquisition by the federal government of a reserve supply of freight cars, is reviewed elsewhere in this issue.

Even with the railroads expanding their car building programs, and with 67,084 cars on order August 1, there is no immediate relief in sight, Commissioner Johnson told the subcommittee. Principally because of steel shortages there will be even fewer cars built in August than in July — when car ownership shrunk about 3,000 cars, he said.

Must Have Steel

During this discussion of the steel problem the commissioner revealed that in a conversation on August 27 with Defense Secretary Louis Johnson, the secretary said he would see to it that the railroads are allocated steel for their car building programs. The commissioner said he told Secretary Johnson the railroads "have got to have the steel to build cars," and they haven't been able to get it. He then asked the secretary if he would help get steel for the car builders, and the secretary replied, "I'll do it."

As to H.R. 9480, the I.C.C. chairman said it has "great promise" as a long-run solution to the recurring freight car crisis. But as to the next few weeks he said "here is one time there is no relief."

"I have prophesied for years what will happen to us and it has happened," he said. He cited figures to show the decline in freight car ownership since 1944, and added that while we may have the cars now we had in 1941 we also have 20 million more people with an all-time peak in production "and Korea on top of it."

Only Railroads Can Do Job

"The railroads," he said, "are bleeding at every pore because of this car shortage." He went on to say they are losing "millions every day," and that the country would be facing a "real crisis" if it were not for the trucks.

The commissioner then turned, however, to a strong defense of the railroads as providers of heavy mass transportation. "You can't move bombs across the United States to drop 800 tons in 30 minutes without the railroads," he declared. "We of the I.C.C. don't care who moves it (traffic) as long as we are sure it will move — and the railroads are the only ones to do it," he said.

At one point in Commissioner Johnson's testimony, Representative O'Hara, Republican of Minnesota, interrupted to comment upon the box car situation in his home state. He said the shortage there "is the worst it has even been," and he cited a recent case, in which he asked the I.C.C. to help get 200 box cars for a grain elevator in the state. To emphasize the seriousness of the situation, he said he wished to "express appreciation to the commission for getting us three!"

In concluding his discussion, the I.C.C. chairman also presented figures to point up a decline in passenger car facilities. He said that since December, 1943, the seat capacity on coaches has decreased approximately 119,000, and that there are today about 3,233 fewer sleeping cars.

Representative Ellsworth, who appeared first before the subcommittee, told the group that a recurring car shortage "has plagued my part of the country for the past 40 years." He said that lumber mills have had to shut down frequently from a lack of cars in the past few years, and read a telegram he had received that morning from a mill saying the car shortage had forced it to go on a five-hour day.

Turning to his proposal to have the government build freight cars, as embodied in H.R. 9480, Mr. Ellsworth said he was convinced that "no pressure at the moment" will correct the present car shortage. His proposal, he said, is aimed at improving future prospects.

"Insurer Against Crisis"

The presentation by Commissioner Splawn was in large part a discussion of Mr. Ellsworth's proposed bill. "The bill is not drawn to put the federal government into the transportation business," the commissioner said, "but it will act as an insurer against crisis and thereby aid, both the railroads and the shippers."

The railroads cannot be expected to buy cars and hold them until a crisis develops, he went on. He said that if the government were to build cars, as provided in H.R. 9480, it would be necessary to guard the government corporation against pressure to sell the cars cheaply, and that care would have to be used to see that government cars were not pressed into service competitively with railroad-owned cars.

Rail Exhibit Becomes Proposed Classification

I.C.C. uses "tentative ratings" to progress 28310 case

The Interstate Commerce Commission has decided to use an exhibit showing "tentative ratings under consideration" by eastern and western railroads as a "tentative uniform classification" for the purpose of progressing the No. 28310 case in which the commission has called upon the carriers to establish a uniform classification for application throughout the country. At the same time, the commission has instituted another class-rate investigation (No. 30660), which will be an inquiry into rail, water, and rail-water rates between Mountain-Pacific territory and the remainder of the United States.

The exhibit to which the commission has given proposed-classification status was filed recently by A. H. Greenly, chairman of the Official Classification Committee. He submitted it on behalf of eastern and western roads, while the southern lines took the position that the appropriate time for filing a proposed uniform classification had not arrived. (See *Railway Age* of July 15, page 55.)

As explained on its title page, the

A SCOTTISH LION on a yellow shield is the distinguishing feature of a new headboard which now adorns the locomotive hauling "The Royal Scot," British Railways express which has linked London and Glasgow daily for more than 100 years. In addition, roof boards on the train's coaches have been painted in the Stuart Royal tartan, with the lettering "The Royal Scot" superimposed. Dining car menu cards are to be distinguished by a special Royal Scot emblem, while the staff will wear a like device in the lapels of their jackets. A special sign, also incorporating a Scottish lion, has been erected over the entrance to platforms 12-15 at Euston station in London to direct passengers to the train, and a similar sign is being provided at Central station in Glasgow, Scotland

exhibit "shows tentative ratings under consideration by chairmen of the Western and Official classification committees for use in connection with class rates within Western Trunk Line territory, within Southwestern territory, and within Official territory, and between those territories, depending on the measure of class rate scales adopted for use within those territories and upon other considerations and conditions which justify ratings different from those shown." As Mr. Greenly put it, the exhibit was "made available as information only to parties of record in Docket No. 28300 at the suggestion of Division 2" of the commission.

No. 28300 is the Class Rate Case, wherein the commission has prescribed a uniform scale of class rates for application in connection with the uniform classification in all territories except Mountain-Pacific. The commission recently issued proposed modifications of this class-rate scale, as originally prescribed; and it is now considering representations of interested parties with respect to the scale as modified.

Meanwhile, it is proceeding with its investigation of class rates in Mountain-Pacific territory—the No. 30416 proceeding which was launched last November. An August 25 notice in that case called upon interested railroads, state commissions, and commercial groups which have similar interests to make arrangements "for the common receipt of verified statements by designated group representatives who will see to the prompt distribution of such documents to interested parties in their various groups."

As to the Greenly exhibit, the commission recognized the status, or lack of status, which the railroads undertook to give it, but nevertheless found it to be generally of style and form appropriate as a reponse to the No. 28310 report's call for a proposed uniform classification. Noting, however, that the exhibit contained no classification rules, the commission supplied the "deficiency" by proposing "tentatively" as rules to govern application of the classification, the rules "which are contained in pages 126 to 177, inclusive, of the current Consolidated Freight Classification, filed with the commission by respondents herein, designated No. 19, effective February 28, 1950, together with subsequent amendments and supplements thereto on file with the commission."

Will Receive Evidence

With a proposed classification thus rounded out, the commission proceeded to make arrangements whereby interested parties can express their views with respect to it. Railroads may submit "evidence-in-chief" in the form of verified statements on or before October 15. The same deadline applies for the submission of "evidence-in-chief" on behalf of other interested parties. Rebuttal evidence, and evidence adopting or concurring in evidence-in-chief statements, will also be received in the form of verified statements—on or before December 1.

The commission's notice made it plain that no interested party was precluded from proposing or supporting "any or another or different rule, practice, or rating, or ratings, commodity description, or carload minimum from those tentatively proposed herein." Also, it made public an August 17 order in No. 28300, denying a request filed by the secretary of the army, who sought to have the Greenly exhibit striken from the record. Consideration of that document, the order said, "will facilitate and will greatly convenience consideration and determination of the issues," and "it is highly desirable in the conduct of this proceeding, that a tentative classification . . . may be used as a basis of reference for testimony."

The order instituting the No. 30660 investigation of transcontinental class rates stipulated that the inquiry would "extend to all rates determined by ratings in the applicable classification of freight proper, whether such ratings are stated as the regular numbered or lettered classes or as percentages of one of such classes." Here, too, there was a notice calling for arrangements whereby interested parties would form groups for the receipt and distribution of verified statements. The order indicated that hearings would be held in the case, but it set no date for them.

I.C.C. Bureau Analyzes 1949 Accident Figures

Seeks greater accuracy in roads' monthly reports

An analysis of railway accident statistics for the calendar year 1949 has been released by the Interstate Commerce Commission's Bureau of Transport Economics and Statistics. The data, published as Accident Bulletin No. 118, are based on monthly accident reports filed with the I.C.C. by all railroads subject to its jurisdiction.

The bureau's introductory comments to the Accident Bulletin include a warning that "the figures in some tables may somewhat underestimate the casualties on the railways in terms of accurate reporting in accordance with the commission's rules." The bureau commented that "past experience" has "unfortunately demonstrated" that not all railroads in all cases report every accident and casualty that is properly reportable.

Data in the bulletin show that during 1949 railroad accidents of all kinds brought death to 3,307 persons and injuries to 32,111. These compare with respective 1948 figures of 3,768 and 43,091. The 1949 fatality rate per million train-miles was 3.76, lowest of those shown in a table which gives annual rates back to 1940; and lower than the average of any of the three five-year periods from 1930 to 1944, inclusive. The 1948 fatality rate was 3.8.

A like showing was made with respect to the passenger-fatality rate, which was 0.97 per billion passenger-

miles in 1949 as compared with 1.33 in 1948. Thirty-four passengers were killed in 1949 railway accidents of all kinds. This was the lowest number shown in the table which covers the period since 1940, and it compares with a 1948 total of 55 passenger fatalities.

The frequency rate for non-fatal injuries to persons of all classes likewise showed a decrease in 1949 as compared with 1948, the figures being 36.5 and 43.4 persons per million train-miles, respectively. Also, the rate for non-fatal injuries to passengers per billion passenger-miles was down from 1948's 110 to 1949's 93.7, the number of passengers injured having been 4,536 and 3,292, respectively. As the bureau pointed out, the passenger-injury rate was less in 1949 than in either of the two previous years and "was considerably lower" than it was in the prewar period.

Data on casualties to employees showed that 403 were killed and 22,104 injured in accidents of all kinds in 1949, as compared with 568 killed and 30,857 injured in 1948. The fatality and injury rates per million man-hours were down, in 1949, as compared with 1948, from 0.168 to 0.141 and from 9.15 to 7.75, respectively. The 0.141 figure was the lowest employee fatality rate shown in a table which goes back to 1940, while the 7.75 rate for employee injuries was the lowest since 1940's 7.05. A total of 2,853 million man-hours was worked in 1949 as compared with 3,372 million in 1948.

The fatality rate for trespassers in 1949 was up slightly from that of the previous year—0.89 as compared with 0.87 per million locomotive and motor train-miles. Meanwhile, the number of trespassers killed was down from 1,370 in 1948 to 1,218 in 1949. The 1949 injury rate for trespassers was 0.78 as compared with 1948's 0.71, although the number of trespassers injured was down from 1,121 to 1,071.

Grade Crossing Accidents

There were 3,523 accidents at railhighway grade crossings in 1949 as compared with 3,964 in 1948. Deaths in such accidents decreased from 1,612 in 1948 to 1,507 in 1949, while the number of persons injured also declined — from 4,255 in 1948 to 3,774 in 1949. Noting that the number of grade crossing accidents per million train-miles has increased each year for the past four years, the bulletin called attention to the fact that the number of such accidents per million automobiles registered "has decreased at a somewhat greater rate." In 1949 the rate of crossing accidents per million train-miles was 3.61, as compared with 3.57 in 1948. In 1946 the rate was 3.39.

"Nearly one-fifth of the persons killed and more than one-third of those injured in motor vehicle grade-crossing accidents during 1949, were in vehicles which ran into the side of trains," the bulletin continued. Grade-crossing accidents occurring between 6 p.m. and 6 a.m. accounted for 57.6 per cent of those killed and 70.9 per cent of those injured in similar accidents in 1949.

In 1949, 10 employees on duty on trains were killed as a result of accidents at highway grade crossings; and 50 passengers and 69 employees were injured. In 1948, two passengers and nine employees were killed, and 42 passengers and 73 employees were injured. Damage to railroad property as a result of train accidents at highway grade crossings (not including accidents where the damage was less than $275) totaled $665,861 in 1949.

Discussing train accidents (those resulting from train operation in which railroad property damage exceeded $275), the bulletin pointed out that in 1949 a further change was made in the minimum damage basis for such accidents, the minimum having been moved upward from $250 to $275. As a result the number of train accidents per million locomotive and motor train-miles in 1949 — 6.26 — is not precisely comparable with the 1948 rate of 7.58.

There were 8,597 reportable train accidents in 1949, of which 2,077 were collisions and 4,867 derailments. "Negligence of employees" was the principal cause of these accidents, accounting for 36.71 per cent of them. Meanwhile 33.15 per cent were caused by "defects in or failures of equipment," and 12.7 per cent by "defects in or improper maintenance of way and structures."

Canadian "Non-Op" Strike Is Ended

Service resumed August 31 after Parliament acts

Railway, express, telegraph and railway-owned hotel services throughout the Dominion of Canada were progressively resumed late this week, following speedy passage by a special session of the Canadian Parliament of a government-sponsored bill designed to end the nine-day-old strike of some 125,000 non-operating railway employees.

The back-to-work movement began late on the evening of August 30, on orders issued by Frank Hall and A. R. Mosher, leaders of the 17 striking unions, almost immediately after the action by Parliament, which had assembled at 3 p.m. on August 29 and stayed in continuous session from 11 a.m. on August 30 until the government bill was passed the same day.

The bill provides that the men must return to work within 48 hr., with an interim wage increase of 4 cents per hour, and allows the railroads and unions 30 days in which to settle by direct negotiation all outstanding differences. Any issues not settled within that period will be referred to a special mediator to be appointed by the government, whose decision on all issues then outstanding is to be binding on both railroads and unions. The bill also stipulates that employees shall not receive any less than the "final offer" presented by the railway companies—which means that they may, in the end, get considerably more, either through negotiation or by decision of the government mediator.

The unions had demanded a 40 hr. work week in place of the present 48-hr. week, with no loss of pay; wage increases of 7 cents an hour for one group of employees and 10 cents for another, and a check-off system for union dues. The railroads had expressed willingness to grant a 44-hr. week, or a 40-hr. week at some future date, and a smaller wage increase. The strike began on August 22, when last-minute negotiations in which the government participated had failed to produce a settlement of the differences, and Parliament was called almost immediately thereafter. (See *Railway Age* of August 26, page 44.) The effect of its action is to provide for eventual compulsory arbitration of any issues in this dispute which the two parties cannot settle directly within the next 30 days.

Rail service between the United States and Canada was also resumed coincident with the ending of the strike. The Central Vermont, for example, announced on August 31 that it would resume on that day through service on its "Ambassador" and "Montrealer" between New York and Boston, Mass., and Montreal, Que. During the strike, these trains had been operated only to and from St. Albans, Vt.

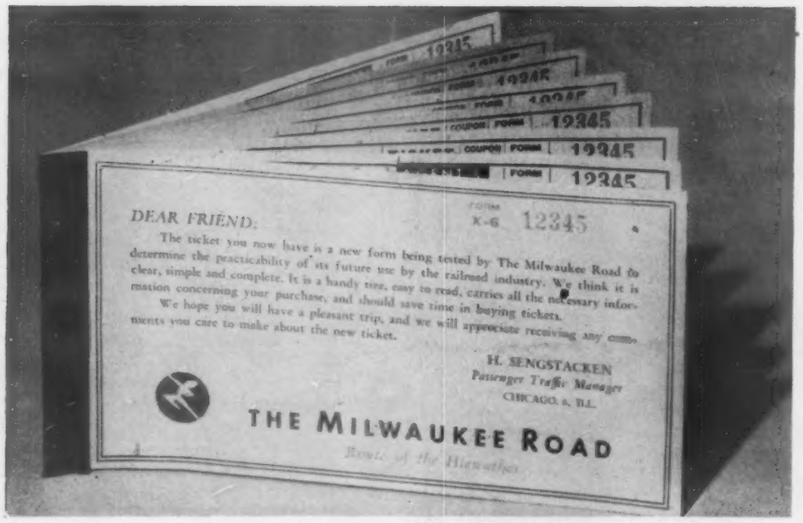
Car Surpluses and Shortages

Average daily freight car surpluses and shortages for the week ending August 26 were announced by the Association of American Railroads on August 31 as follows:

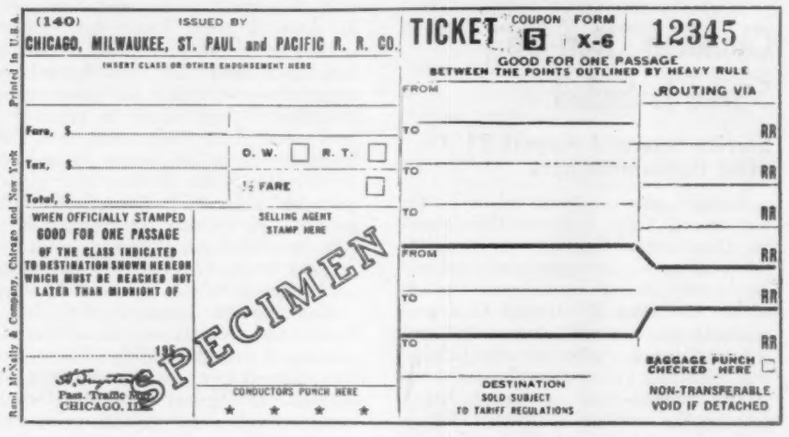
	Surplus	Shortage
Plain Box	0	21,477
Auto Box	9	386
Total Box	9	21,863
Gondola	0	6,963
Hopper	0	8,550
Covered Hopper	0	124
Stock	722	5
Flat	11	1,542
Refrigerator	3,399	30
Other	230	400
Total	4,371	39,477

Produce Industry Groups Disagree on Reefer Types

Differences of opinion within the produce industry as to the type of refrigerator car best suited to that industry's needs were pointed up in a statement issued August 31 by officers of the United Fresh Fruit & Vegetable Association. The statement took issue with one made earlier by the National League of Wholesale Fresh Fruit & Vegetable Distributors, which recom-


DEAR FRIEND:
FORM X-6 12345
The ticket you now have is a new form being tested by The Milwaukee Road to determine the practicability of its future use by the railroad industry. We think it is clear, simple and complete. It is a handy size, easy to read, carries all the necessary information concerning your purchase, and should save time in buying tickets.
We hope you will have a pleasant trip, and we will appreciate receiving any comments you care to make about the new ticket.
H. SENGSTACKEN
Passenger Traffic Manager
CHICAGO, ILL.
THE MILWAUKEE ROAD

NOW IN EXPERIMENTAL SERVICE, this book-type six-coupon interline passenger ticket is being issued at five ticket offices of the Chicago, Milwaukee, St. Paul & Pacific. The test is being conducted for a period of 60 days, during which time comments of agents, passengers and train conductors are being requested. Measuring 3¼-in. by 6¼-in., the book contains, in order, an agent's stub, six ticket coupons and a passenger's receipt coupon. All inner pages have a carbon backing so that the selling agent merely has to fill in the agent's stub, make one punch of any necessary endorsements and make a single validation stamp to execute the entire ticket. Heavy ruled brackets, as shown on the reproduction of coupon 5, indicate to the train conductor the points between which each coupon is valid for passage. The purpose of the new form is threefold: simplified issuance by agents; greater convenience to passengers, and easier honoring by conductors. Devised by the Western lines Committee for Simplification of Ticket Forms, the ticket book will be presented to all U. S. railroads for adoption if trial use, which the Milwaukee has volunteered to undertake, proves it to be entirely practical


(140) ISSUED BY
CHICAGO, MILWAUKEE, ST. PAUL and PACIFIC R. R. CO.
INSERT CLASS OR OTHER ENDORSEMENT HERE
TICKET COUPON FORM 5 X-6 12345
GOOD FOR ONE PASSAGE BETWEEN THE POINTS OUTLINED BY HEAVY RULE
FROM
ROUTING VIA
TO
RR
Fare, $
O. W. R. T.
Tax, $
½ FARE
Total, $
WHEN OFFICIALLY STAMPED GOOD FOR ONE PASSAGE OF THE CLASS INDICATED TO DESTINATION SHOWN HEREON WHICH MUST BE REACHED NOT LATER THAN MIDNIGHT OF
SELLING AGENT STAMP HERE
SPECIMEN
BAGGAGE PUNCH CHECKED HERE
CONDUCTORS PUNCH HERE
DESTINATION SOLD SUBJECT TO TARIFF REGULATIONS
NON-TRANSFERABLE VOID IF DETACHED
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mended that the present reefer fleet be increased by 50,000 cars—"preferably of the Giant Canadian" type.

As reported in the *Railway Age* of August 26, page 54, the League's statement was embodied in a letter written by its secretary, J. R. Van Arnum, to president William T. Faricy of the Association of American Railroads. United's statement was issued by its executive vice-president, C. W. Kitchen, and the chairman of its Refrigerator Car Committee, John N. Kelley.

They did not question "the immediate need for a much larger fleet of modern, standard, all-purpose reefers," but they said that the trend in recent years has been "definitely away from over-sized equipment." Six years ago, Mr. Kitchen recalled, "some car builders" proposed the building of giant reefers as a "quick solution" of shortages; but "this proposal met with reasoned objections, both from railroad men and produce industry leaders . . . whose experience showed that oversized receipts have often proved a liability to shippers and receivers alike."

"Except for big dealers in a few terminal markets," Mr. Kitchen continued, "the giant reefer has distinct disadvantages, in that it forces a dealer to take delivery of larger quantities than his trade can absorb without risking serious deterioration before the last packages of his shipment can be disposed of."

Messrs. Kitchen and Kelley emphasized that their statement was intended "merely for clarification," and to "answer many inquiries as to whether the United Refrigerator Car Committee has changed its position with respect to the Giant Canadian type of car." Mr. Van Arnum's letter to Mr. Faricy was "contrary to the preference of fresh fruit and vegetable industry leaders, expressed repeatedly at United conferences, for a car of standard size and equipment," Mr. Kelley said.

Meanwhile Mr. Kitchen referred to an August 9 meeting in Washington, which was sponsored by United and attended by railroad officers and representatives of the A.A.R., the Interstate Commerce Commission, the Department of Agriculture, and the United Refrigerator Car Committee.

"It was recommended at this conference," Mr. Kitchen said, "that from 30,000 to 35,000 modern, all-purpose refrigerator cars be built as soon as possible. The difference between that number and the National League's recommendation of 50,000 is not important, but the kind of cars built is important to the entire industry. On the basis of carefully weighed opinion and practical experience since the first over-sized cars went into experimental service some years ago, we have grave doubts that they would be used extensively under normal business conditions, particularly as they present some difficulties, both in loading and unloading."

Bill Proposes Reserve Supply of Freight Cars

Representative Ellsworth, Republican of Oregon, has introduced in the House a bill to provide for acquisition by the federal government of a reserve supply of freight cars to be available for use by the railroads on the basis of need, as determined by the Interstate Commerce Commission. The bill is H.R.9480.

The car pool would be maintained by a government-owned corporation, the Railroad Car Reserve Corporation, created within the Department of Commerce and having authority to issue $250 million of capital stock. The secretary of commerce would be authorized to call upon the secretary of the treasury for subscriptions aggregating that amount.

The I.C.C. would be required to keep informed as to the car-supply situation, and it would have authority to "direct" the corporation "to arrange for the maintenance of such numbers of cars as the commission determines will be

(Continued on page 83)

13,000 More Seats
For New York Central Commuters

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Roominess, fluorescent lighting, and all-year air conditioning will make these St. Louis-Built cars passenger favorites.

100 Ultra modern all-year air conditioned coaches for the "Central" are latest products of St. Louis' *"60 humming acres"*

ON June 1st, Westchester commuters enjoyed a treat. They rode a "preview" of the 130-passenger electric multiple unit coaches which will serve New York Central's Hudson and Harlem divisions.

These 100 cars, presenting innovations in comfort and convenience, were also planned for economical, efficient operation. What was more natural than that they were built by St. Louis, specialists in mass transportation equipment?

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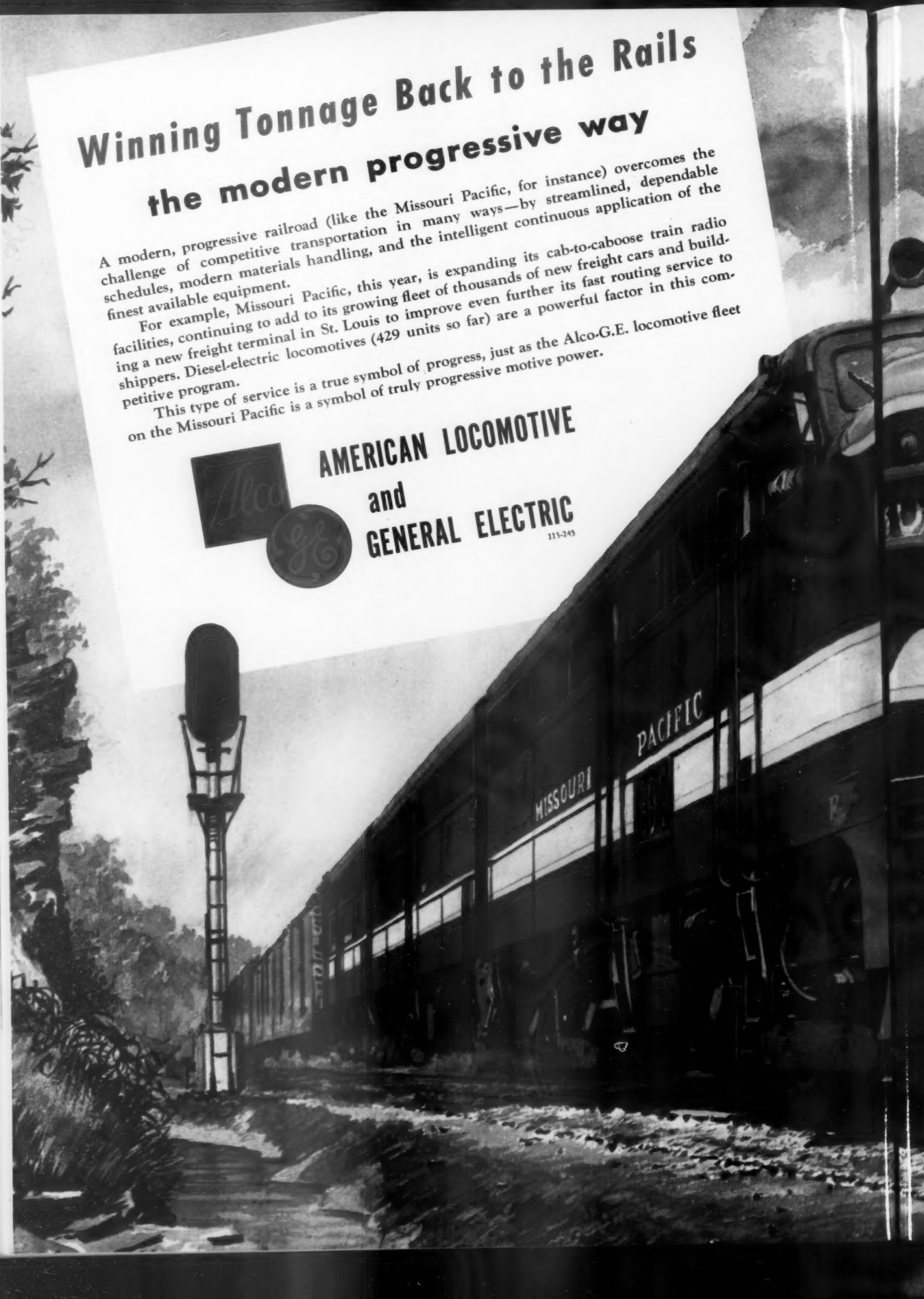
For example, Missouri Pacific, this year, is expanding its cab-to-caboose train radio facilities, continuing to add to its growing fleet of thousands of new freight cars and building a new freight terminal in St. Louis to improve even further its fast routing service to shippers. Diesel-electric locomotives (429 units so far) are a powerful factor in this competitive program.

This type of service is a true symbol of progress, just as the Alco-G.E. locomotive fleet on the Missouri Pacific is a symbol of truly progressive motive power.

AMERICAN LOCOMOTIVE
and
GENERAL ELECTRIC

113-245



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309

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(Continued from page 78)

necessary in order to provide an adequate reserve supply of publicly owned freight cars to supplement the normal supply of privately owned cars. . ." The commission would also have authority to assign the cars to any railroad, the using carriers to pay "reasonable rental" under a lease agreement with the corporation.

The section relating to assignment of the cars to railroads would give the commission authority to make the assignments "either upon complaint or upon its own initiative without complaint, at once, if it so orders, without answer or other formal pleading by the interested carrier or carriers, and with or without notice, hearing, or the making or filing of a report, as the commission may determine." The assignments would be terminated by the commission upon its own initiative, or upon application of the involved carriers—"except with respect to cars which have been purchased by the carrier."

In the latter connection, other provisions of the bill stipulate that each lease agreement would include an option to purchase the leased cars at "fair market value," under terms and conditions prescribed by the commission. Rental payments would be applied to the purchase price. In the event of disagreement between the corporation and a railroad over lease and purchase terms, the matter would be resolved by the commission.

In setting up the corporation, the secretary of commerce would be required to appoint an advisory board of six members—"from among individuals prominently identified with the railroad industry, having due regard for the desirability of securing adequate representation for all geographical areas of the nation and all segments of the economy affected by railroad operations." Members of the board would receive $50 and expenses for each day actually engaged in the business of the board. In addition to its authority to acquire cars, the corporation would be authorized also to acquire, "by lease or otherwise, trackage or other property suitable for the storage of cars," and to maintain its cars "in operating condition."

Freight Car Loadings

Loadings of revenue freight in the week ended August 26 totaled 836,744 cars, the Association of American Railroads announced on August 31. This was a decrease of 14,281 cars, or 1.7 per cent, compared with the previous week; an increase of 89,533 cars, or 12.0 per cent, compared with the corresponding week last year; and a decrease of 54,922 cars or 6.2 per cent, compared with the equivalent 1948 week. The decrease in loadings from the previous week was attributed to the five-day "token" strikes of conductors and trainmen on five railroads and terminal companies, and to the strike on Canadian railroads, which interfered with traffic destined for Canada.

Loadings of revenue freight for the week ended August 12 totaled 847,465 cars, and the summary for that week as compiled by the Car Service Division, A.A.R., follows:

REVENUE FREIGHT CAR LOADINGS
For the week ended Saturday, August 12

District	1950	1949	1948
Eastern	149,255	124,227	155,643
Allegheny	172,585	139,608	183,424
Pocahontas	64,233	48,410	75,786
Southern	130,215	109,218	134,835
Northwestern	140,347	134,671	140,879
Central Western	128,763	115,436	133,470
Southwestern	62,067	56,459	67,239
Total Western Districts	331,177	306,566	341,588
Total All Roads	847,465	728,029	891,276
Commodities:			
Grain and grain products	54,488	55,118	54,336
Livestock	7,630	9,877	10,181
Coal	154,216	116,765	191,204
Coke	15,059	8,943	14,901
Forest products	52,007	41,243	53,411
Ore	84,389	71,313	75,510
Merchandise l.c.l.	88,185	90,611	105,582
Miscellaneous	391,491	334,159	386,151
August 12	847,465	728,029	891,276

Loadings of revenue freight for the week ended August 19 totaled 851,025 cars, and the summary for that week as compiled by the Car Service Division follows:

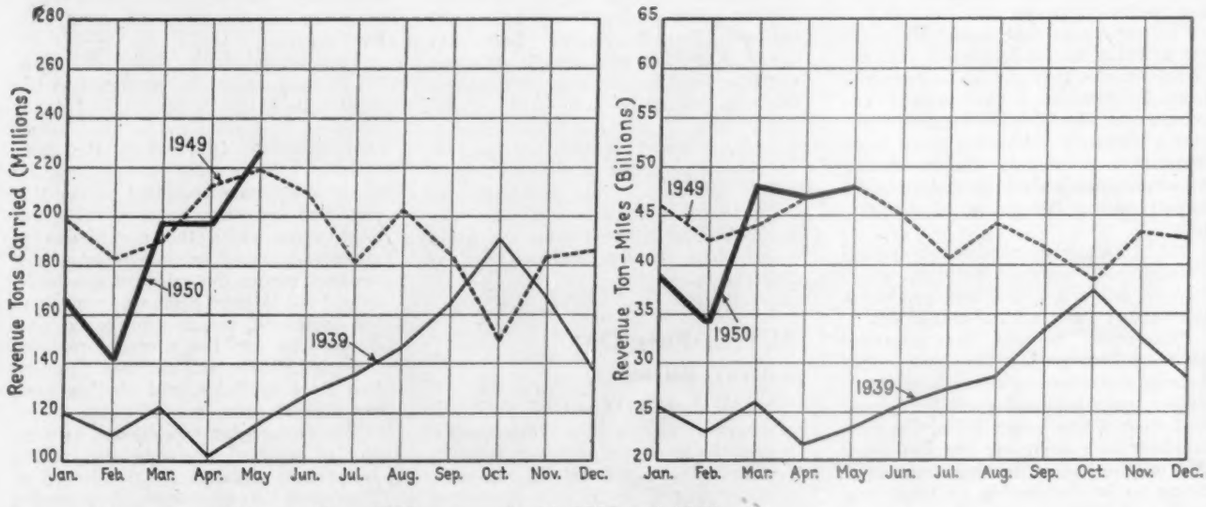
REVENUE FREIGHT CAR LOADINGS
For the week ended Saturday, August 19

District	1950	1949	1948
Eastern	148,651	127,570	156,105
Allegheny	171,421	140,586	186,798
Pocahontas	64,329	45,925	74,576
Southern	131,236	108,565	131,851
Northwestern	143,029	132,960	146,765
Central Western	129,863	117,735	135,290
Southwestern	62,496	57,874	69,278
Total Western Districts	335,388	308,569	351,333
Total All Roads	851,025	731,215	900,663
Commodities:			
Grain and grain products	52,595	50,680	56,271
Livestock	7,945	10,663	10,931
Coal	157,453	113,434	187,241
Coke	15,075	9,560	14,782
Forest products	50,686	40,498	53,376
Ore	81,561	69,241	77,162
Merchandise l.c.l.	89,004	91,663	106,188
Miscellaneous	396,706	345,476	394,712
August 19	851,025	731,215	900,663
August 12	847,465	728,029	891,276
August 5	837,218	716,863	878,647
July 29	844,849	724,044	894,375
July 22	829,884	718,516	882,129
Cumulative total 33 weeks	23,440,848	23,675,253	26,921,780

Emergency Board Ends O.R.C.-Pullman Hearings

Hearings on the dispute between the Order of Railway Conductors and the Pullman Company before a three-man Presidential emergency board were completed early this week in Chicago. The hearings, which began on July 17, were concerned principally with the union's demand for a reduction in the basic work month for sleeping and parlor car conductors from 225 to 210 hours without a reduction in take-home pay. (See *Railway Age* of July 22, page 48, and April 15, page 67.)

The board will make its recommendations to President Truman on November 4, 30 days after which the Pullman conductors will be free to strike if the issues remain in dispute. The recommendations of the board will also



Revenue tons and revenue ton-miles—1950 compared with 1939 and 1949

affect some 30 sleeping and parlor car conductors of the Chicago, Milwaukee, St. Paul & Pacific, whose demands are parallel.

Two Railway Battalions Alerted for Duty

Two railway operating battalions, with headquarters in Philadelphia, Pa., have been alerted for active duty and are expected to receive orders soon to report at training camps early in September.

The two battalions are the 712th, sponsored by the Reading and the Central of New Jersey, and the 724th, sponsored by the Pennsylvania. The 712th, made up of men from eastern Pennsylvania and New Jersey, is commanded by Major A. C. Palmer, assistant division engineer for the Reading at Reading, Pa.; the 724th, composed of men from Pennsylvania, New Jersey, New York, Maryland, Delaware and Ohio, is commanded by Major A. M. Schofield, P. R. R. track supervisor at Lancaster, Pa.

Hays Condemns Overloading of Trucks

Public highways are essential to national defense and anyone who damages them by deliberately operating a seriously overloaded truck is no better than a saboteur, Joseph H. Hays, of Chicago, counsel for the Association of Western Railways, told the convention of the Brotherhood of Railroad Signalmen of America at Hamilton, Ont., on August 22. "There were over 40,000 arrests for overloading of trucks in a 12-month period in Illinois alone," Mr. Hayes said. "One company accounted for 1,523 arrests for overloading in Missouri during an 11-month period ending a few weeks ago. This wholesale disregard of the law is particularly vicious not only because it is the basis for cut-throat rate competition to take business away from other carriers, but because it results in wanton and widespread destruction of expensive public highways.

"To the extent that public highways are essential to, or important for, national defense, they should be protected from destruction. Under present circumstances, one who deliberately operates a seriously overloaded truck is no better than a saboteur. Public officials who temporize with such violations indirectly serve the cause of Communism."

Mr. Hayes also condemned federal expenditures for road building which have no military justification and which use needed materials and manpower.

"Congress," he said, "has approved an $11-billion project for the so-called Interstate System—a network of superduper roads connecting all the largest and most of the larger cities. Congress is about to appropriate the first token $70 million for its development and in doing so is abandoning its traditional policy of 50-50 matching by the states. It is furnishing from the federal till as much as 75 per cent. I can see no military justification whatever, especially at this time, for this ambitious outpouring of resources and money. We should reexamine our entire road-building program in the realistic light of present and potential needs for money, materials, and manpower."

Signaling Order Modified For C.B.&Q.-C.M.St.P.&P.

Division 3 of the Interstate Commerce Commission has granted petitions of the Chicago, Burlington & Quincy and the Chicago, Milwaukee, St. Paul & Pacific for modification of its June 17, 1947, order which requires railroads to install automatic train-stop or train-control systems, or automatic cab-signal systems, on lines over which any train is operated at a speed of 80 m.p.h or more. The modifications were made, respectively, in the commission's tenth and eleventh reports (both by Commissioner Patterson) on further hearing in No. 29543.

The relief accorded the Burlington will permit a different scheduling of the required installations, but does not change the December 31, 1952, deadline by which all such installations must be completed. The basic order stipulated, among other things, that when the required installations were to be made on more than 100 mi. of track, specified percentages and mileages were to be completed each year through 1952.

The modifications made for the Burlington provide that the installations required of it "be made on not less than 400 miles of track on or before December 31, 1951, and on the remaining miles of track on or before December 31, 1952." The report indicated that about 1,125 mi. of track will be involved, and that the road will install on such lines a cab-signal system.

Other relief accorded both the Burlington and the C.M.St.P.&P. will permit the roads to operate certain freight locomotives in cab-signal territory without being equipped with cab-signal devices. The Burlington had also asked that when cab signals or other such devices fail to operate properly while a locomotive is in road service, the locomotive may still be operated at a reduced speed to complete its run. In this respect, the Division 3 report called attention to the new signaling rules that are to become effective October 1. One of these rules will grant relief along the line requested by the Burlington.

N.Y.C. Puts Out L.C.L. Bulletin

Under date of August 15, the traffic department of the New York Central issued the first of a series of bulletins setting forth "significant improvements and extensions" in its l.c.l. operations. The bulletin will be distributed "from time-to-time," says the covering letter, over the signature of F. N. Nye, assistant to the general freight traffic manager, and will take note of new car lines set up, new coordinated truck schedules, and service improvements involving the N.Y.C. and its connecting lines. Shippers and receivers of l.c.l. freight, who desire to receive this bulletin regularly, said Mr. Nye, may do so by applying to any N.Y.C. traffic representative.

Among the more important announcements in the first bulletin is the extension of "Pacemaker" service to South Bend, Ind., and Elkhart. Daily cars to these points will be made at Utica (N. Y.) Transfer. Merchandise from New York and Boston, Mass., is scheduled to connect with these cars at Utica, "thus providing third morning service to both Elkhart and South Bend." Also announced is the "day of arrival" trucking of westbound merchandise freight at Chicago to connections, supplementing recent inauguration of second morning service between New York and Chicago. This, the bulletin concludes, will effect savings "of up to 48 hours over former schedules." Thus, freight destined to Milwaukee, Kansas City, and similar points will be "at destination third day out of New York, Boston, Worcester and Springfield, except when it arrives in Chicago on a Saturday or Sunday."

Royal Commission Report To Be Postponed

Despite earlier indications that the long-awaited report of Canada's Royal Commission on Transportation might be released in September, in view of the Dominion-wide strike of the railroad's non-operating employees (see *Railway Age* of August 26, page 44), there now appears to be no possibility of the report's being available for discussion or action at the present special session of the Canadian Parliament. Thus, the present session's primary job is likely to be confined to settlement of the wage-hour dispute, with long-range planning left for the 1951 meeting of Parliament.

The commission's chairman, Hon. W. F. A. Turgeon, has returned to his diplomatic duties in Dublin, and is not expected back in Canada until sometime this fall, after which the commission will be able to complete its study of evidence compiled earlier this year and last year. Some of the questions upon which the commission is expected to make recommendations are whether or not the railways should be subsidized to meet demands upon them for increased wages and other purposes, how far the several provinces can go to make rail-highway competition more equitable, and whether present railway rates are adequate.

The commission was created as a result of political repercussions from a freight-rate decision by the Board of Transport Commissioners, then headed by Col. James Cross, as a result of

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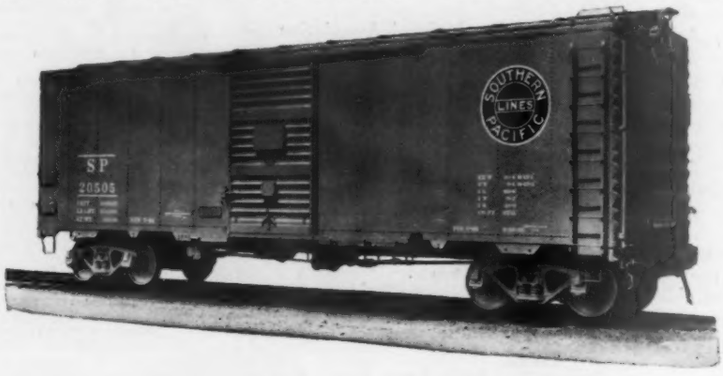

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which the then Prime Minister, the late MacKenzie King, appointed M. W. Archibald to head the transport board and at the same time established the Royal Commission to study the larger problems of Canadian transportation.

Drivers' Strike Looms on M. P. Bus Subsidiary

The Missouri Pacific has issued a statement to the press indicating that a strike of some 300 motor coach operators, members of the Brotherhood of Railroad Trainmen, is imminent, and that all service by the Missouri Pacific Bus Lines (a wholly owned subsidiary of the railroad) will be affected if the walkout occurs. No strike date had been set, but the statement said a strike vote has been taken, and all provisions of the Taft-Hartley Act have been complied with, so that the operators could call the strike at any time. Last minute efforts to settle the dispute, which includes working rule adjustments and an increase in base pay of one-half cent a mile, are being made by Commissioner A. E. Johnson of the federal conciliation and mediation service.

The M.P. Bus Lines operate some 500 schedules a day over 5,200 route-miles in a 10-state area of the southwest and, in addition, provide some 200 suburban schedules in the Kansas City area. The annual payroll is over $2 million. R. J. McDermott, vice-president of the line, has stated that the rules changes and wage increases proposed by the union would increase annual operating expenses by $180,000. "With the increased use of private automobiles for both short haul and long haul transportation," Mr. McDermott said, "there is a definite trend downward in revenues earned by the bus industry." The M.P. Bus Lines operated at a loss throughout 1949 and for the first six months of this year. Under the recently expired contract, drivers were receiving between $10.27 and $17.91 for a day's work, somewhat above the scale of other bus lines in the territory.

ORGANIZATIONS

Coordinated Mechanical Programs at Chicago

Six meetings at two hotels on September 18, 19 and 20

This year the meetings of the Coordinated Mechanical Associations—Air Brake, Master Boiler Makers, Car Department Officers', Fuel and Traveling Engineers, Locomotive Maintenance Officers—as well as the sessions of the Electrical Sections, Association of American Railroads Mechanical and Engineering Divisions, will be held at Chicago, beginning September 18, through September 20. All except the Car Department Officers' Association will meet at the Hotel Sherman; the Car Department officers will meet at the LaSalle Hotel. To more effectively coordinate the railroads' rapidly increasing use of electrical equipment, Electrical Sections will meet as one body and will also hold a joint session with the Locomotive Maintenance Officers' Association. There will be an exhibit of electrical products by the Railway Electric Supply Manufacturers' Association. The individual associations will forego regular sessions Tuesday afternoon, September 19, so that their members may visit this exhibit.

The programs of the associations follow:

Master Boiler Makers' Association

MONDAY, SEPTEMBER 18

9:30 a.m.

Message, President E. H. Gilley, general boiler foreman, Grand Trunk Western

Address by W. C. Bowra, general superintendent motive power and car equipment, G.T.W.

Report of the Committee on Law, C. L. Combes (chairman), associate editor, Railway Mechanical and Electrical Engineer

Report—Topic No. 5: Advantages of Steam Space Spray Boiler Checks, or Top Checks vs. Side Boiler Checks, F. E. Godwin (chairman), mechanical inspector, Canadian National

2 p.m.

Report of the Executive Board

Address, A. F. Stiglmeier, secretary-treasurer, general supervisor boilers and welding, New York Central System

Message, C. E. Bell, superintendent of safety, Reading

Report—Topic No. 2: Proper Brick Setting in Locomotive Fireboxes for Oil- and Coal-Burning Locomotives, H. R. Barclay (chairman), general boiler inspector, Northern Pacific

Report on Steam Heat in Passenger Cars, by K. D. Relyea, test department, N.Y.C.

TUESDAY, SEPTEMBER 19

9:15 a.m.

Address by Edward H. Davidson, director, Bureau of Locomotive Inspection, Interstate Commerce Commission

Election of officers

Report—Topic No. 1: Treating of Feedwater for Locomotive Steam-Hot Boilers, T. W. Hislop (chairman), water-service engineer, N.Y.C.

WEDNESDAY, SEPTEMBER 20

9 a.m.

Report—Topic No. 3: Advantages of Special Coating Boilers and Tenders: Flues and Tubes, E. H. Heidel (chairman), general boiler inspector, Chicago, Milwaukee, St. Paul & Pacific

Report—Topic No. 4: Conditioning of Boiler and Firebox Sheets after Classified Repairs; Preparing Locomotive for Storage and Removal from Storage, R. W. Barrett (chairman), chief boiler inspector, C.N.

2 p.m.

Report—Topic No. 6: Proceedure for Welding Staybolts, Floyd R. Seeley (chairman), general boiler inspector, Union Pacific

Car Department Officers' Association

MONDAY, SEPTEMBER 18

10 a.m.

Address by President G. H. Wells, assistant to superintendent, car department, N.P.

Address by W. W. Judson, vice-president (operating), N.P.

Report of Committee on Air-Conditioning Equipment—Operations and Maintenance, C. S. Albright (chairman), supervisor electrical equipment, N.Y.C.

2 p.m.

Report of Committee on Wheel-Shop Practices, R. L. Frame (chairman), wheel-shop foreman, N.Y.C.

Report on Car Lubrication, G. R. Andersen (chairman), superintendent car department, Chicago & North Western

TUESDAY, SEPTEMBER 19

9 a.m.

Report of Committee on Interchange and Billing for Car Repairs, R. W. Hollon (chairman), mechanical inspector, Chicago, Burlington & Quincy

Address by D. P. Loomis, chairman, Association of Western Railways

Report of Committee on A.A.R. Loading Rules, J. Krupka (chairman), general car foreman, C.B.&Q.

WEDNESDAY, SEPTEMBER 20

9 a.m.

Report of Committee on Responsibilities of Car Department Supervision—Qualifications and Selection of Car Department Supervision, R. E. Baker (chairman), assistant general manager (mechanical), Boston & Maine

Report of Committee on Modern Methods of Painting, R. Middleton, painter foreman, New York, Chicago & St. Louis

2 p.m.

Report of Committee on Analysis of Train Yard Operations to Improve Performance—Education of Car Inspectors, G. J. Flanagan (chairman), general car inspector, N.Y.C.

Miscellaneous Reports

Election of officers

Railway Fuel and Traveling Engineers' Association

MONDAY, SEPTEMBER 18

10 a.m.

Address by D. S. Ellis, president, Lima-Hamilton Corporation

Gas-Turbine Electric Locomotive, by R. A. Williamson, manager, railroad rolling stock division, Locomotive and Car Equipment Department, General Electric Company

Operation of Electro-Motive Diesel Locomotives, by W. H. Fortney, chief road foreman of engines, Cleveland, Cincinnati, Chicago & St. Louis

Rating and Starting Tonnage of Diesel Locomotives, J. Z. Heskett, special engineer, Baltimore & Ohio

2:30 p.m.

On-the-Road Trouble Shooting, with slides, by D. Martin, Electro-Motive Division, General Motors Corporation. To be followed by a question period.

TUESDAY, SEPTEMBER 19

9 a.m.

Address by J. Hyslop, Hanna Coal Company

Progress on the Use of Prepared Coal and Handling Coal in Freezing Weather, by E. Benton, Ohio Coal Association

Oil for Steam Locomotives, by G. E. Anderson, general fuel supervisor, Great Northern

Education of Steam Engine Crews, by A. H. Glass, chief power and fuel supervisor, Chesapeake & Ohio

Effectiveness of Co-ordination of Railroad and Smoke Inspectors in Control of Railroad Smoke, by H. C. Ballman, smoke regulation engineer, Columbus, Ohio

WEDNESDAY, SEPTEMBER 20

9 a.m.

Passenger-Train Handling, by F. T. McClure, supervisor air brakes, Atchison, Topeka & Santa Fe

Freight-Train Handling and Dynamic Braking, by R. H. Francis, general road foreman of equipment, St. Louis-San Francisco

Operation and Trouble Shooting (Alco-G.E.), with slides, by S. E. Lodge, American Locomotive Company. To be followed by a question period.

Operation of Yard Diesels, by M. G. Stewart, Washington Terminal Company

Election of officers

2 p.m.

Alco-G.E. Electrical Equipment, by H. R. Hill, General Electric Company. To be followed by a question period

Abuse of the Diesel Locomotive, by R. H. Francis, general road foreman equipment, St.L.-S.F.

Operation of Vapor Steam Generator, with slides, by G. C. Scott, service manager, Vapor Heating Corporation

Locomotive Maintenance Officers' Association

MONDAY, SEPTEMBER 18

10 a.m.

Address by President G. E. Bennett, superintendent motive power, Chicago & Eastern Illinois.

Address—Recommended Tonnage Ratings and Their Relation to Diesel Maintenance, J. Z. Heskett, special engineer, B.&O.

2 p.m.

Report of Committee on Diesels—General, T. T. Blickle (general chairman), mechanical assistant, A.T.&S.F.

Report of Committee on Diesels—Mechanical; L. L. Luthey (chairman), supervisor, Diesel engines, A.T.&S.F.

(a) Program vs. Term Maintenance—Diesel Locomotives—Cost Accounting

(b) Air and Oil-Filter Maintenance

(c) Steam Generator Maintenance

Address by E. H. Davidson, director, Bureau Locomotive Inspection, I.C.C.

TUESDAY, SEPTEMBER 19

9 a.m.

Report of Committee on Personnel Training, L. J. Brasher (chairman), assistant master mechanic, Belt of Chicago, Topic: Technical Training of Diesel Supervisors

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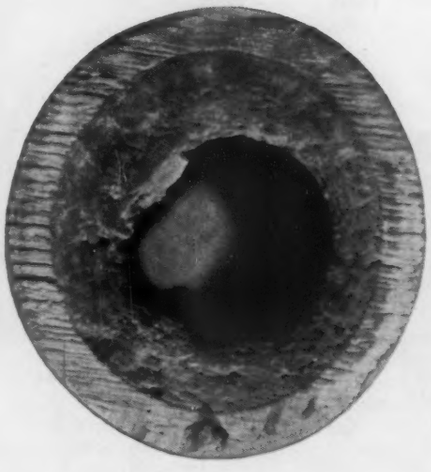
and it could have been prevented



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Report of Committee on Shop Tools, C. N. Rector (chairman), production engineer, C.&N.W.

(a) Tools and Methods for Diesel and Steam Locomotive

(b) Wheel and Tire Turning

(c) Carbide Tools

WEDNESDAY, SEPTEMBER 20

9 a.m.

Report of Committee on Terminal Facilities—General, J. T. Daley (general chairman), superintendent motive power, Alton & Southern

Report of Committee on Terminal Facilities—Diesel, H. E. Niksch (chairman), master mechanic, Elgin, Joliet & Eastern

(a) Facilities for Diesel Locomotive at Outlying Points

(b) Types of Ventilation in Diesel Shops

Report of Committee on Terminal Facilities—Steam, C. E. Pond (chairman), assistant to superintendent motive power, Norfolk & Western. Topic: Improving Steam Locomotive Performance Through Laboratory Standing and Road Tests

Report of Committee on Shop Practices—Diesel and Steam, F. B. Rykoskey (chairman), supervisor of shops, B.&O.

(a) Roller bearing maintenance

(b) Cleaning and painting Diesel Locomotives

(c) Diesel parts repair

2 p.m.

Joint Session with Electrical Section, Mechanical Division, A.A.R.

Report of Committee on Automotive and Electric Rolling Stock, Electrical Section—L. S. Billau (chairman), electrical engineer, B.&O.

Diesel-Electric report—W. P. Miller, superintendent of Diesel and motor-car equipment, C.&N.W.

(a) Traction-Motor Armature Bearings

(b) Main Generator and Traction-Motor Flash-Over and Prevention

(c) Grease vs. Oil Lubrication in Anti-Friction Bearings

(d) Dust Proofing Electrical Control Equipment

Air Brake Association

MONDAY, SEPTEMBER 18

10 a.m.

President's address

Approved Maintenance Committee, F. W. Dell (chairman), G.T.W.

2 p.m.

Broken Pipes Diesel Locomotive Air Brake Equipment, Central Air Brake Club, R. W. Daniel (chairman), supervisor air brakes, Chicago, Indianapolis & Louisville

Radiation—Diesel Locomotives, Manhattan Air Brake Club

TUESDAY, SEPTEMBER 19

9 a.m.

Brake Pipe Leakage—W. B. Weightman (chairman), general air brake inspector, Pennsylvania

Charging Long Freight Trains and Facilities Therefore, R. J. Densberry (chairman), C.&O.

ABLC-Brake Equipment, G. L. Cotter, Westinghouse Air Brake Company

WEDNESDAY, SEPTEMBER 20

9 a.m.

Maintenance—Budd Disc Brakes, H. I. Tramblie (chairman), air brake engineer, C.B.&Q.

Good Brake System Maintenance Improves Freight Train Handling, Pittsburgh Air Brake Club

Characteristics of Air Flow in Automatic Train Braking, W. F. Klein, New York Air Brake Company

2 p.m.

Troubles and Remedies—24-RL Brake Equipment, St. Louis Brake Club

Business Session

Joint Sessions, Electrical Sections, Engineering and Mechanical Divisions, Association of American Railroads

MONDAY, SEPTEMBER 18

10 a.m.

Joint meeting of the Coordinated Associations, Grand Ballroom, Hotel Sherman.

Address—Speaker and subject to be announced.

Joint Meeting of the Electrical Sections, Engineering and Mechanical Divisions.

Address by S. R. Negley, (chairman, Electrical Section, Engineering Division), electrical engineer, Reading.

Address by W. S. H. Hamilton, (chairman, Electrical Section, Mechanical Division), electrical engineer, N.Y.C.

Unfinished business, Electrical Section, Mechanical Division.

New business, Electrical Section, Mechanical Division.

Election of officers, Electrical Section, Mechanical Division.

Report of Joint Committee on Wire, Cable and Insulating Materials.

Report of Joint Committee on Power Supply.

2 p.m.

The Committees which will present reports are as follows:

2—Electrolysis—Engineering Division.

3—Overhead Transmission Line and Catenary Construction—Engineering Division.

9—Track and Third Rail Bonds—Engineering Division.

10—Illumination—Engineering Division.

Application of Radio and Communicating System to Rolling Stock—Mechanical Division.

Motors and Controls.

TUESDAY, SEPTEMBER 19

9 a.m.

Unfinished business, Electrical Section, Engineering Division.

New business, Electrical Section, Engineering Division.

Report of Committee 11—Electric Heating—Engineering Division.

Report of Joint Committee on Welding and Cutting.

Report of Committee on Car Electrical Equipment—Mechanical Division.

WEDNESDAY, SEPTEMBER 20

9 a.m.

Report of Committee on Car Air Conditioning Equipment—Mechanical Division.

2 p.m.

Joint Session with Locomotive Maintenance Officers' Association.

Report of Committee on Automotive and Electric Rolling Stock—Mechanical Division.

Diesel-Electric Report—

Traction-Motor Armature Bearings.

Main Generator and Traction-Motor Flash-Over and Prevention Grease vs. Oil Lubrication in Anti-Friction Bearings.

Dust-Proofing Electrical Control Equipment.

The **Railroad Club of Chicago** will sponsor a railfan inspection tour of all railroad facilities of Kansas City, Mo., September 8 through 11. The party will leave Chicago via the Atchison, Topeka & Santa Fe on September 8, and will visit that road's Argentine yard before breaking up into smaller groups to visit other railroad facilities of the Kansas City area.

The **Pacific Coast Transportation Advisory Board** will hold its 83rd regular meeting in the Alexandria Hotel, Los Angeles, Cal., on September 13 and 14.

The **Atlantic States Shippers Advisory Board** will hold its 82nd regular meeting at the Hotel Seneca, Rochester, N. Y., on September 27 and 28. Toastmaster Paul W. Johnston, president of the Erie, will introduce guest speaker Henry J. Taylor, radio commentator, economist and journalist.

SUPPLY TRADE

R. B. A. Elects Beckley to Succeed Kolb

Russell M. Beckley, Jr., has been appointed secretary of the Railway Business Association, succeeding F. Hartford Kolb, who retired on June 30. Mr. Beckley is a graduate of Bucknell University and the Harvard Graduate School of Business Administration. Mr. Kolb's retirement ended his term of 17 years of service to the association as field manager and as secretary-treasurer.

A. E. Botts, who retired in July, 1949, as assistant chief engineer (maintenance), of the Chesapeake & Ohio, with headquarters at Richmond, Va., has joined the **F. Burkart Manufacturing Company** as sales representative of the Burkart Tie Pad in the Richmond territory.

The **D. J. Murray Manufacturing Company,** Wausau, Wis., has appointed **C. H. Broward** as representative for its grid unit heaters. Mr. Broward's territory includes Georgia, North Carolina and South Carolina, and Polk, McMinn, Roane, Morgan and Scott counties in Tennessee.

Harold Kern, formerly comptroller of the **National Pneumatic Company,** has been appointed treasurer, with headquarters at Boston, Mass.

OBITUARY

Carter Blatchford, president of the Blatchford Corporation, Carter-Blatchford, Inc., and Beck & Blatchford, Inc., at Chicago, died on July 27 at Copley Memorial Hospital in Aurora, Ill., after a brief illness. He was formerly associated with the Spencer Otis Company (predecessor of the Blatchford Corporation) of Omaha, Neb. This company later moved to Chicago, and Mr. Blatchford subsequently became its president. In addition to the Blatchford Corporation, Carter Blatchford, Inc., was organized in 1939, followed by Beck & Blatchford, Inc., in 1945.

Henry F. Pope, 82, who retired in 1945 as a director and board chairman of the National Malleable & Steel Castings Co., died on July 28. Mr. Pope entered the foundry business in 1884 as an office boy for the Cleveland Malleable Iron Company. In 1891, when the National Malleable Castings Company was organized by merger of

Henry F. Pope

the Cleveland concern with companies in Chicago, Indianapolis, Ind., and Toledo, Ohio, Mr. Pope was made assistant treasurer. He was named a director in 1899 and vice-president in 1909. He subsequently was elected president, and in 1923 reorganized the concern as the National Malleable & Steel Castings Co.

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3. **Fights oxidation**
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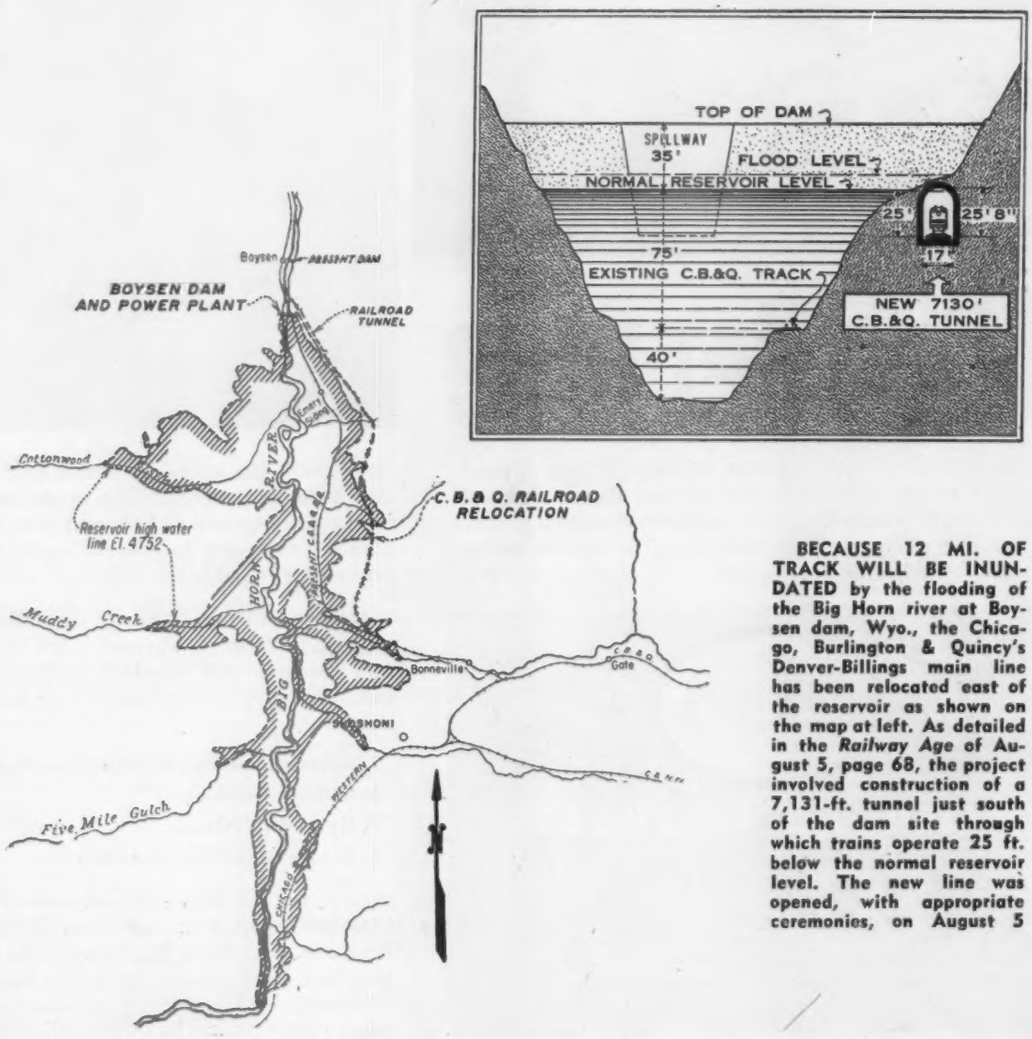
CONSTRUCTION

Illinois Central.—A contract has been awarded to L. F. Favret, New Orleans, La., for construction of Diesel facilities at Mays yard, Harahan, La., at an approximate cost of $315,000.

Missouri-Kansas-Texas.—In connection with construction by the U. S. Army Engineers of Whitney dam and reservoir, a water conservation and flood control project on the Brazos river near Whitney, Tex., work is under way on a new 11.3-mi. railroad line to replace the existing 12.8-mi. M.-K.-T. (Texas Central) line from a point near Whitney to a point east of Morgan. (See *Railway Age* of February 18, page 72.) Holders of the general construction contract are Winston Brothers and Consolidated Western Constructors, Inc., while steelwork for major bridges on the new line is being fabricated and erected by the Virginia Bridge Company, a subsidiary of the United States Steel Corporation. One bridge, across Steele's creek, will consist of six 75-ft. girder spans, while a much larger structure, across the Brazos river, will require 25 deck-plate girder spans. For these spans 50 girders — each 121 ft. 10 in. long, 10 ft. 7 in. deep, and weighing 88,600 lb. — are being fabricated by Virginia Bridge at Birmingham, Ala. When in full operation, officials of the bridge company expect to set a span a week, including track, thus completing the Brazos bridge in less than six months.

New York Central.—To serve its Mott Haven, N. Y., coach yard, this company has put into service, just south of its High Bridge station, twin car-washing machines with a capacity of some 400 passenger cars each normal working day. To provide an adequate supply of water for the new machines, the railroad also drilled a 12-in. well, 200 ft. deep, and provided three 50,000-gal. storage tanks.

New York Central.—The following projects are currently in progress: Erection of a new concrete block yard office at West Detroit, Mich., by Ellington-Miller Company, Chicago; construction of a new turntable and erection of Diesel engine service facilities at Englewood (Chicago), Ill., by Ellington-Miller; construction of a machine shop, office, storeroom and locker facilities at Stanley yard, Toledo, Ohio, by the Duffy Construction Corporation, Cleveland, Ohio; reconstruction of Cuyahoga River bridge No. 8 in connection with a river widening project at Cleveland, by the Bates & Rogers Construction Co. and the Mount Vernon Bridge Company; construction of a service building and office at Hill yard, Indianapolis, Ind., by F. A. Wilhelm, Indianapolis; construction of two freight platforms at the East St. Louis, Ill., freighthouse by company forces; and erection of passenger shelter sheds at Marion, Ohio, by company forces, except that the Marion Contracting Company will do the steel work and the Tripple Service Company will do the electrical work.

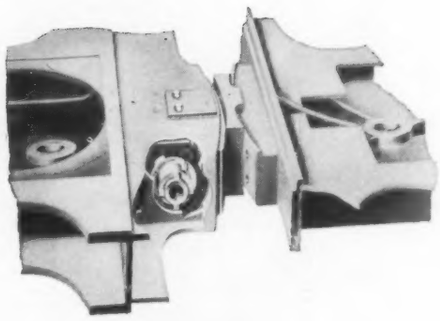


BECAUSE 12 MI. OF TRACK WILL BE INUNDATED by the flooding of the Big Horn river at Boysen dam, Wyo., the Chicago, Burlington & Quincy's Denver-Billings main line has been relocated east of the reservoir as shown on the map at left. As detailed in the *Railway Age* of August 5, page 68, the project involved construction of a 7,131-ft. tunnel just south of the dam site through which trains operate 25 ft. below the normal reservoir level. The new line was opened, with appropriate ceremonies, on August 5

News Department Continued on Page 95

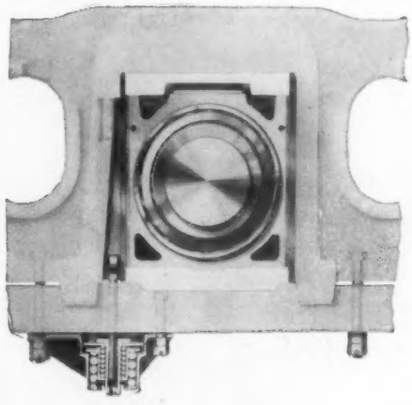
TWO SHOCK ABSORBERS

that reduce locomotive maintenance costs!



FRANKLIN E-2 RADIAL BUFFERS

The Franklin E-2 radial buffer reduces maintenance by dampening and absorbing horizontal shake and vertical vibration. This results in less wear on chafing plates, drawbars and pins; fewer pipe failures; less displaced brickwork; and fewer loose cabs. It requires minimum attention and will make any locomotive, at any speed, a better riding engine. Crews appreciate the greater comfort it brings.



FRANKLIN COMPENSATORS AND SNUBBERS

Equally important with roller-bearing or surface-bearing locomotives, the Franklin Compensator and Snubber keeps the driving box, or housing, snug in the pedestal jaw, regardless of expansion or wear. It will absorb unusual thrusts and shocks. Driving box pound is eliminated. Wear and the possibility of failure of crank pins and rod bearings are minimized. Tire mileage is extended by reduction of quarter slip.

FRANKLIN RAILWAY SUPPLY COMPANY

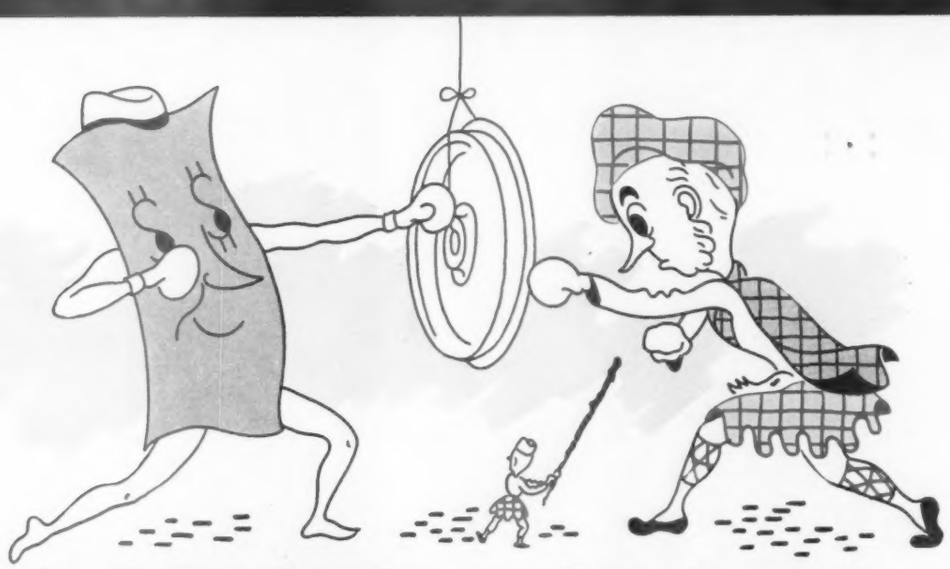
A CORPORATION

NEW YORK • CHICAGO • MONTREAL

STEAM DISTRIBUTION SYSTEM • BOOSTER • RADIAL BUFFER • COMPENSATOR AND SNUBBER • POWER REVERSE GEARS
FIRE DOORS • DRIVING BOX LUBRICATORS • OVERFIRE JETS • JOURNAL BOXES • FLEXIBLE JOINTS • CAR CONNECTION

Wurra Wurra abo't y

Lower First Cost! Immediate Savings!



More Rugged Than Ever! Extra Service!

get Chilled

t your dollars?

On-the-spot Deliveries! Less $$ Inventory!

Save On Salvage Trade-Ins, Too!

Car Wheels by a.c.f.

AMERICAN CAR AND FOUNDRY COMPANY, NEW YORK • CHICAGO • ST. LOUIS
CLEVELAND • PHILADELPHIA • WASHINGTON • PITTSBURGH • SAN FRANCISCO

Streamlite HAIRINSUL GIVES MAXIMUM EFFICIENCY!

At any given moment, many thousands of refrigerator cars, insulated with Streamlite HAIRINSUL, are rolling down the main lines, or standing on sidings — loaded and ready to roll to markets everywhere.

The valuable perishables which they carry are fully protected against sudden and extreme temperature changes... and the cost of refrigeration remains low year-in and year-out, because Streamlite HAIRINSUL gives maximum efficiency under all operating conditions.

LOW CONDUCTIVITY. Thoroughly washed and sterilized, all-hair heat barrier. Rated conductivity — .25 btu per square foot, per hour, per degree F., per inch thick.

LIGHT WEIGHT. Advanced processing methods reduce weight of STREAMLITE HAIRINSUL by 40%.

PERMANENT. Does not disintegrate when wet, resists absorption. Will not shake down, is fire-resistant and odorless.

EASY TO INSTALL. Blankets may be applied to car wall in one piece, from sill to plate and from one side door to the other. Self-supporting in wall sections between fasteners.

COMPLETE RANGE. STREAMLITE HAIRINSUL is available ½" to 4" thick, up to 127" wide. Stitched on 5" or 10" centers between two layers of reinforced asphalt laminated paper. Other weights and facings are available.

HIGH SALVAGE VALUE. The all-hair content does not deteriorate with age; therefore has high salvage value. No other type of insulation offers a comparable saving.

Sets The Standard By Which All Other Refrigerator Car Insulations Are Judged

Streamlite HAIRINSUL

AMERICAN HAIR & FELT CO.

Dept. H509, Merchandise Mart, Chicago 54, Ill.

EQUIPMENT AND SUPPLIES

Domestic Equipment Orders Reported in August

Domestic orders for 296 Diesel-electric locomotive units, 12 electric locomotives, 21,106 freight-train cars and two rail Diesel passenger cars were reported in *Railway Age* in August. Estimated cost of the locomotives is $45,750,000, of the freight-train cars $111,275,000, and of the passenger cars $260,000. An accompanying table lists the orders in detail.

During the first eight months of 1950, *Railway Age* has reported domestic orders for 1,547 Diesel-electric locomotive units and 15 steam and 12 electric locomotives costing an estimated $224,436,000; 68,930 freight-train cars costing about $346,786,600; and 16 rail Diesel cars costing approximately $2,124,000.

Locomotives

Date	Purchaser	No.	Type	Builder
Aug. 5	Equitable Life Assurance	14†	1,600-hp. Freight	Baldwin
		24†	1,000-hp. Switching	Baldwin
Aug. 5	L. & N.	25	1,500-hp. Gen. Purpose	Electro-Motive
		16	1,200-hp. Switching	Electro-Motive
Aug. 5	St. L.-S.F.	25	1,500-hp. Gen. Purpose	Electro-Motive
		5	1,200-hp. Switching	Electro-Motive
		4	1,200-hp. Switching	Fairbanks, Morse
Aug. 5	S.A.L.	30	1,500-hp. Rd.-Switch.	Electro-Motive
		20	1,600-hp. Rd.-Switch.	American-G.E.
		6	2,250-hp. "A" Passenger	Electro-Motive
		10	1,000-hp. Switching	Baldwin
Aug. 5	T.C.I. & R.R.	2	1,600-hp. Gen. Purpose	Baldwin
		5	1,200-hp. Switching	Baldwin
Aug. 5	Youngstown Sheet & Tube Co.	3	750-hp. Switching	Baldwin
Aug. 5	C.M. St. P. & P.	12@	Electric	General Electric
Aug. 12	C.M. St. P. & P.	5	1,200-hp. Switching	Fairbanks, Morse
		5	1,200-hp. Switching	Baldwin
		5	1,200-hp. Switching	American-G.E.
Aug. 12	K. & I. T.	5	1,200-hp. Switching	Fairbanks, Morse
Aug. 12	N. Y. C.	6#	1,200-hp. Switching	Lima-Hamilton
		21#	800-hp. Switching	Lima-Hamilton
Aug. 19	U. P.	3	1,600-hp. Gen. Purpose	Fairbanks, Morse
Aug. 26	Erie	14	2,250-hp. Passenger	Electro-Motive
		3	1,500-hp. Freight	Electro-Motive
		4	1,500-hp. Rd.-Switch.	Electro-Motive
		1	1,000-hp. Switching	Electro-Motive
		8	1,500-hp. Freight	American-G.E.
		2	2,250-hp. Passenger	American-G.E.
		6	1,500-hp. Passenger	American-G.E.
		10	1,500-hp. Rd.-Switch.	American-G.E.
		1	1,000-hp. Switching	American-G.E.
		2	1,000-hp. Switching	Baldwin
		6	1,500-hp. Rd.-Switch.	Baldwin

Freight Cars

Aug. 5	N. Y. C.	500*	Refrigerator	Despatch Shops
		1,000**	55-ton Box	Despatch Shops
		500	55-ton Box	Despatch Shops
		500	70-ton Gondola	Despatch Shops
		500	70-ton Hopper	Despatch Shops
		1,000	55-ton Hopper	Despatch Shops
		1,000	Box	Pullman-Standard
		500	70-ton Gondola	Bethlehem Steel
		500	70-ton Gondola	Greenville Steel Car
		1	125-ton Flat	Greenville Steel Car
Aug. 5	P. R. R.	2,000	Gondola	Amer. Car & Fdy.
		1,000	Gondola	Pullman-Standard
		750	Gondola	General American
		250	Box	General American
		1,000	Box	Pressed Steel Car
Aug. 5	St. L.-S. F.	500	50-ton Box	Pullman-Standard
Aug. 5	S. A. L.	500	Box	Pullman-Standard
		200	Cov. Hopper	Pullman-Standard
		100	Cov. Phosphate	Pullman-Standard
		400	Gondola	Bethlehem Steel
		25	Caboose	Int'l Ry. Car & Equip.
Aug. 5	U. P.	1,000	50-ton Box	Amer. Car & Fdy.
		1,000	Gondola	General American
		1,000	50-ton Box	R. R. Shops
		500	Flat	R. R. Shops
Aug. 12	Wabash	500	50-ton Box	R. R. Shops
Aug. 19	Ann Arbor	100	50-ton Box	Amer. Car & Fdy.
Aug. 19	A. C. L.	400	70-ton Cov. Hopper	Amer. Car & Fdy.
Aug. 19	B. & O.	200	50-ton Automobile	Amer. Car & Fdy.
		300	70-ton Flat	R. R. Shops
Aug. 19	C. & E. I.	200	Box	Pullman-Standard
		200	Box	Amer. Car & Fdy.
		100	Box	R. R. Shops
Aug. 19	N. J. I. & I.	100	Box	Amer. Car & Fdy.
Aug. 19	N. & W.	1,000	70-ton Hopper	R. R. Shops
Aug. 19	Western Fruit Express	400	Refrigerator	Co. Shops
Aug. 26	D. & T. S. L.	100	70-ton Cov. Hopper	Greenville Steel Car
Aug. 26	Erie	5	125-ton Flat	R. R. Shops
		100	70-ton Flat	R. R. Shops
Aug. 26	M. P.	300††	70-ton Gondola	R. R. Shops
		250	50-ton Box	R. R. Shops
		200††	70-ton Cov. Hopper	R. R. Shops
		50	50-ton Pulpwood	R. R. Shops
Aug. 26	Montour	300	50-ton Hopper	Greenville Steel Car
Aug. 26	Spokane Int'l.	75	Flat	Amer. Car & Fdy.

Passenger Cars

Aug. 19	B. & O.	2	Rail Diesel Car 1	Budd

†To be leased to the Baltimore & Ohio.
@Originally ordered for the U.S.S.R. At least two will be equipped for passenger service.
#For the Chicago River & Indiana and the Chicago Junction.
*For the Merchants Despatch Transportation Corp.
**For the Pittsburgh & Lake Erie.
††Including 50 each for the Gulf Coast Lines and the International-Great Northern.

FREIGHT CARS

The **Baltimore & Ohio** has not ordered 200 50-ton covered hopper phosphate cars as inadvertently reported, because of a printer's error, on page 54 of the August 19 *Railway Age*.

The **Baltimore & Ohio** has ordered 1,000 70-ton gondola cars from the Bethlehem Steel Company. The inquiry for these cars, plus 1,000 50-ton box cars, was reported in *Railway Age* of August 5, page 73.

The **Chicago, Rock Island & Pacific** has ordered 500 flat cars from its own shops and 350 50-ton box cars from the General American Transportation Corporation. The inquiry for these cars, plus 500 gondola cars, was reported in *Railway Age* of August 19, page 54.

The **Delaware, Lackawanna & Western** has ordered 500 70-ton gondola cars from the American Car & Foundry Co.

The **Fruit Growers Express** has ordered 1,000 40-ton refrigerator cars from the Pacific Car & Foundry Co. and 100 50-ton refrigerator cars from its own shops.

The **Lehigh Valley** has ordered an additional 200 70-ton gondola cars from the Bethlehem Steel Company.

The **Northern Pacific** has announced a $2½-million car building program which will include an immediate order for 500 50-ft. 50-ton box cars from the road's shops at Brainerd, Minn. Upon completion of this initial order, plans call for production of 50 steel cabooses, 100 covered hopper cars and 500 40-ft. box cars. In addition, 250 gondolas are to be purchased or built at the Brainerd shops. The 50-ft. box cars initially ordered will have 8-ft. doors designed to accommodate mechanical handling of lumber, plywood and similar types of freight. Production schedules call for 10 to 12 cars to be built each day; it is anticipated the entire initial box car order will be completed by the middle of October.

The **Pacific Fruit Express** has announced plans to add 2,100 refrigerator cars to its fleet, which presently numbers 38,000 cars. Included in the program are 100 heavily insulated 50-ft. cars for carrying frozen foods. The company already has 414 such cars in service. The remaining 2,000 new cars will be similar to other cars the company has placed in service during the post-war period, except that they will be equipped with larger sliding doors and will have steel slatted, instead of wooden floor racks. The new cars will be built in P.F.E. shops at Los Angeles, Cal., and Colton, as soon as materials are available. It is ex-

pected the first cars will be in service before the middle of 1951. Since the end of World War II, P.F.E. has placed 9,000 new cars in service and reconditioned or given general repairs to 12,000 others. The company built 3,000 new cars in 1949, and the program for 1950 calls for general repairs to almost 4,000 more.

The **Reading** has ordered 500 70-ton gondola cars from the Bethlehem Steel Company at an approximate cost of $2,800,000.

The **St. Louis-San Francisco** has ordered 100 50-ton flat cars from the American Car & Foundry Co.

The **Western Maryland** has ordered 410 70-ton gondola cars from the Bethlehem Steel Company, 40 70-ton flat cars from its own shops, 100 70-ton covered hopper cars from the American Car & Foundry Co., 100 50-ton box cars from the Greenville Steel Car Company and 50 50-ton box cars from the Pressed Steel Car Company. In addition, 120 steel containers, for use in 10 of the gondola cars, have been ordered from the Youngstown Steel Door Company. Inquiry for the cars was reported in *Railway Age* of August 19, page 54.

PASSENGER CARS

The **Illinois Central** is currently taking delivery from the Pullman-Standard Car Manufacturing Company of eight lightweight 10-roomette, 6-double-bedroom sleeping cars, costing a total of $1,200,000, which originally were part of a larger order placed by the Chesapeake & Ohio but transferred to the I.C. before the cars were actually built. With their receipt, the I.C. will have placed a total of 13 new sleeping cars in service since the first of the year.

LOCOMOTIVES

The **Atchison, Topeka & Santa Fe** has ordered 10 1,600-hp. Diesel-electric road-switchers from Fairbanks, Morse & Co., and 10 passenger units from the Electro-Motive Division of General Motors Corporation.

The **Clinchfield** has ordered 12 1,500-hp. general purpose Diesel-electric locomotive units from the Electro-Motive Division of General Motors Corporation.

The **Georgia** has ordered four 1,500-hp. general purpose Diesel-electric locomotive units from the Electro-Motive Division of General Motors Corporation.

SIGNALING

The American Locomotive Company has ordered from the Union Switch & Signal Co. four sets of two-channel, two-way, and 12 sets of single channel, two-way, FM inductive train communication equipment. This equipment will be installed in Diesel-electric road and transfer locomotives being built for the **Pennsylvania.**

The **Duluth, Missabe & Iron Range** has ordered from the Union Switch & Signal Co. material to install C.T.C. at Holman Junction, Minn. The 2½-ft. style C control machine will be installed at Taconite Junction, Minn. In addition to the code equipment, the order includes style H-2 searchlight signals, M-22B switch machines, relays, rectifiers, transformers, switch circuit controllers and housings. Field installation will be handled by railroad forces.

IRON & STEEL

The **Missouri Pacific** has been authorized by the federal district court at St. Louis, Mo., to spend about $6 million for new rail, tie plates and rail fastenings. Under the authorization the road will purchase some 240 mi. of new rail, 160 mi. of which will be used on the M.P., while the balance will be laid on the subsidiary Gulf Coast Lines and International-Great Northern.

MARINE

The **Reading** has ordered three 1,600-hp. Diesel-powered tugboats from the RTC Shipbuilding Corporation, Camden, N. J. The tugs, to be 109 ft. long, will cost about $950,000, and are intended for use in New York harbor.

ABANDONMENTS

Montana Western. — The I.C.C. has denied this road's application for authority to abandon its entire line, approximately 17 mi., between Valier, Mont., and a junction with the Great Northern near Conrad. The road operates into Conrad under a trackage rights agreement with the G.N.

In denying authority for the abandonment, the commission also prescribed joint through rates for carload grain moving from points on the M.W. to points on the G.N. In the past rates on grain from points on the M.W. have been proportionals based on Conrad, and the commission finding was to the effect that the M.W.'s share of such rates is too low.

The commission report said the joint through rates to be established "may not exceed the present combination of proportional rates to and from Conrad." It then prescribed the basis for division of the joint through rates, and noted that such a division will increase the M.W.'s annual revenue by about $58,000. This will insure safe and efficient operation of that carrier's line and allow it to pay interest on its indebtedness, the commission said.

Pennsylvania-Reading Seashore. —The I.C.C. has dismissed without prejudice an application in which this road asked authority to abandon operation over 3.7 mi. of the West Jersey & Seashore's Maurice River branch. (See *Railway Age* of April 8, page 61.) The West Jersey was also asking authority to abandon the line, but in a letter filed with the commission on August 22 the roads asked permission to withdraw their joint application.

Application has been filed with the I.C.C. by:

SOUTHERN PACIFIC. — To abandon operation over 62.7 mi. of branch line between Roy, N. M., and Dawson. The line is owned by the Dawson, an S. P. subsidiary, which also seeks abandonment authority.

Division 4 of I.C.C. has **authorized:**

NEW YORK CENTRAL.—To abandon approximately 5.3 mi. of branch line in Niagara county, N. Y., from Suspension Bridge to Lewiston. Division 4's report said inconvenience to shippers would not be serious in comparison to losses which would be incurred by the N.Y.C. from continued operation.

CAR SERVICE

I.C.C. Service Order No. 861, effective from August 18 until September 18 unless otherwise modified, relates to free time and demurrage charges on open-top cars held under load at lower Great Lakes ports. The effect of the order is to preserve for cars reconsigned at the ports for movement beyond by rail, the more liberal free-time allowances and lower demurrage charges which are applicable on cars remaining in rail-lake service.

I.C.C. Service Order No. 851 has been modified by Amendment No. 2 which set back the expiration date from August 31 to October 31. The order authorizes railroads serving Nevada, Oregon, California and Arizona to furnish not more than three S.F.R.D. or P.F.E. refrigerator cars (not suitable for transporting commodities requiring protective service) in lieu of one box car ordered for transporting commodities between points in those states.

I.C.C. Service Order No. 848 has been modified by Amendment No. 2 which set back the expiration date from August 31 to December 31. The order permits the use of S.F.R.D. and P.F.E. refrigerator cars (which are not suitable for commodities requiring protective service) for the transportation of cotton from points in California and other western territory to points on the Atchison, Topeka & Santa Fe, Southern Pacific, Union Pacific, and Texas & New Orleans.

I.C.C. Service Order No. 855 has been modified by Amendment No. 2 which set back the expiration date from August 22 to September 30. The order authorizes railroads serving Colorado, Kansas, Missouri, Nebraska, Iowa, Wyoming and South Dakota, to

ROAD-PROVED...

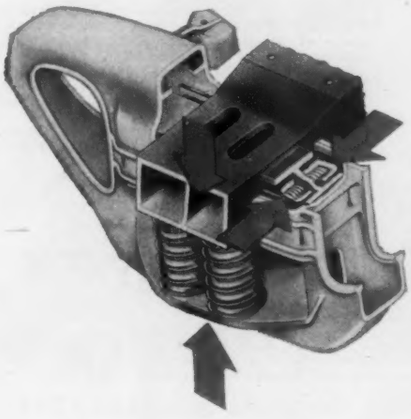
- by *MILLIONS* of miles of service on over 20 leading lines—
- by scientific, instrumentation mainline road tests—

SCULLIN L-V TRUCK

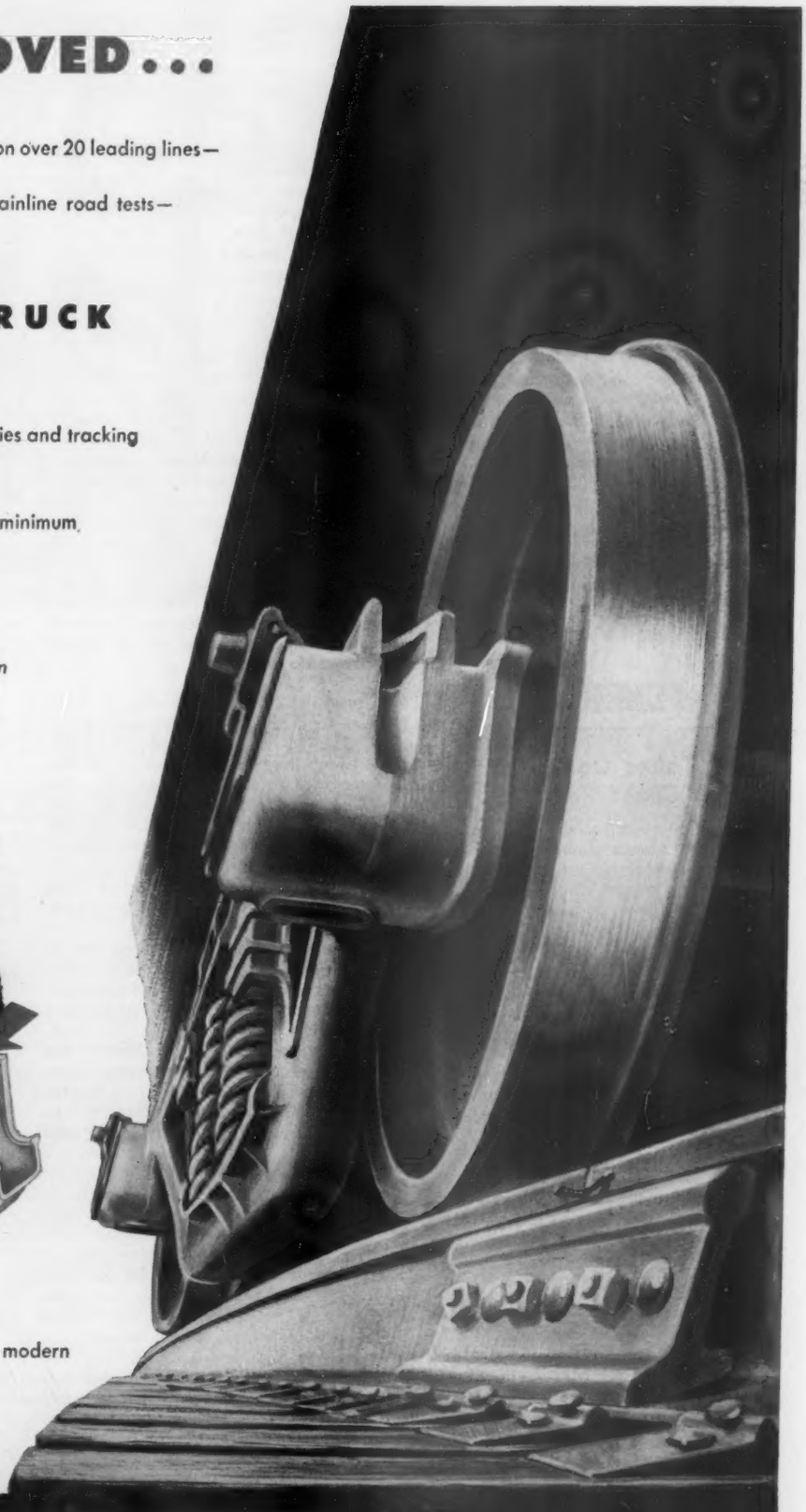
LATERAL VERTICAL CUSHIONED MOTION

- provide ultimate riding qualities and tracking characteristics at all speeds
- reduce lading damage to a minimum.

—because *exclusive L-V action* completely cushions and controls *both* lateral and vertical motion— *without* costly maintenance!



No freight car is more modern than its trucks.



STEEL CASTINGS MANUFACTURER

SCULLIN STEEL CO. SAINT LOUIS 10, MISSOURI

NEW YORK — CHICAGO — CLEVELAND — BALTIMORE — RICHMOND, VA. — MEXICO CITY, D. F.

furnish for each boxcar ordered not more than two refrigerator cars (not suitable for transporting commodities requiring protective service), or not more than two single-deck stock cars (not immediately needed for the movement of livestock) for loading and transporting alfalfa meal or any other commodity between points in the states named.

I.C.C. Service Order No. 859 has been modified by Amendment No. 1, effective August 25. The amended order prohibits acceptance of any type of car (whether ordered or appropriated without being ordered) which is loaded with lumber, shingles, plywood, doors, or other lumber or forest products, in Oregon or Washington, and tendered for forwarding to another point to be stopped off to complete loading, unless the shipper or consignee certifies on the bill of lading that freight loaded in the car at the first loading point equals or exceeds 25 per cent of the marked or nominal capacity of the car. Before the amendment, the latter provision was "25 per cent of tariff minimum weight."

FINANCIAL

G. N. Takes Option to Buy Pacific Coast Railroad

Subject to approval of the Interstate Commerce Commission, the Great Northern has taken an option for purchase of all capital stock of the Pacific Coast, a 30-mi. shortline operating in and near Seattle, Wash. The transaction involves 22.43 mi. of P.C. double-track main line which extends from Washington st., Seattle, through Renton to Maple Valley, with a 7.44-mi. branch from the latter point to Black Diamond. The P.C. has considerable industrial trackage and property in the Renton district although the line's Seattle waterfront facilities were recently sold to the Port of Seattle. G.N. President F. J. Gavin anticipates a "substantial growth" in the Renton territory and considers the P.C. "a fine addition to the Great Northern's trackage in and south of Seattle." Acquisition of the short line will cost the G.N. $1.7 million.

Bangor & Aroostook.—*Bond Modification.*—Following notification that the required number of bondholders have given their approval, Division 4 of the I.C.C. has ordered into effect this road's plan to modify its outstanding bonds. The division's order makes the bond adjustments effective as of July 1. As reported in *Railway Age* of April 22, page 76, the road proposed to alter its bonds under the so-called Mahaffie Act (section 20b of the Interstate Commerce Act). The road is also authorized to issue up to 249,300 additional shares of common stock in connection with the modification.

New York, Susquehanna & Western.—*Reorganization.*—For the period between January 1, 1947, and March 31, 1950, the I.C.C. has fixed $40,000 as the maximum limit that may be paid for services rendered by special counsel to this road's trustee.

St. Louis Southwestern.—*Lease of Subsidiaries.*—This road has applied to the I.C.C. for authority to modify and extend its present lease agreements with two wholly owned subsidiaries, Gray's Point Terminal and Valley Terminal. As stated in the application, the proposed changes would "make no alteration of substance" except as to duration and depreciation. The new agreements would permit the St.L.S., in filing a consolidated income tax return, to take depreciation upon the leased properties. The new leases would be effective as of January 1, and would continue in effect to July 1, 1990. The V.T. consists of 22.8 mi. of yard tracks and sidings near East St. Louis, Ill., while the line of the G.P.T. extends 13.3 mi. between Delta, Mo., and Illmo, and includes about 38.6 additional miles of second main line, way and yard switching tracks.

Seaboard Air Line.—*Control of G.F.&A.*—This road has applied to the I.C.C. for authority to acquire 5,500 shares of first preferred stock of the Georgia, Florida & Alabama, and thereby acquire control of the latter road. Acquisition would be made through the Seaboard's wholly owned subsidiary, Southeastern Investment Company, and Seaboard proposes to operate the G.F.&A. properties under a long-term lease.

Seaboard's application noted that it already holds all of G.F.&A.'s second preferred stock as well as all outstanding common. The present transaction would give Seaboard all the outstanding first preferred stock. Should the commission approve the acquisition plan, the road proposes to surrender the first and second preferred to G.F.&A "as a capital contribution" and thereafter control the latter through ownership of the common stock.

In payment for the 5,500 shares of G.F.&A. first preferred, Seaboard would exchange voting trust certificates rep- stock. The certificates are valued at resenting 6,750 shares of its common $200,947, and are held by Southeastern. The latter company would first obtain the G.F.&A. stock, which would then be sold to Seaboard for $200,947.

The proposed lease of the G.F.&A. would be effective as of January 1, and would run to December 31, 2048. Seaboard would pay rental of approximately $200,000 a year.

New Securities

Application has been filed with the I.C.C. by:

PENNSYLVANIA.—To assume liability for $10,005,000 of series Z equipment trust certificates, the second and final installment of a proposed $20,115,000 issue. The entire issue will finance in part 91 Diesel-electric locomotives, 19 passenger-train cars, and 1,700 freight cars, costing an estimated $25,143,750. (See **Railway Age** of April 1, page 76.) The present certificates would be applied against final deliveries of this equipment. All the certificates are to be dated April 1, and those in the present installment would mature in 15 annual installments of $667,000 each, beginning April 1, 1951. They would be sold on the basis of competitive bids.

Division 4 of the I.C.C. has **authorized:**

CHICAGO, ROCK ISLAND & PACIFIC.—To assume liability for $2,352,000 of series H equipment trust certificates to finance in part 34 Diesel-electric locomotives, costing an estimated $3,138,393. (See **Railway Age** of July 1, page 85.) The certificates will be dated August 1, and will mature in 24 semiannual installments of $98,000 each, beginning February 1, 1951. Division 4's report approved a selling price of 99.47 with interest at 2⅛ per cent—the bid of the First National Bank of Chicago—which will make the average annual cost of the proceeds approximately 2.22 per cent.

SEABOARD AIR LINE.—To assume liability for $3,570,000 of series H equipment trust certificates to finance in part 14 Diesel-electric locomotives and 500 70-ton covered hopper phosphate cars. Estimated total cost of the new equipment is $4,783,511. (See **Railway Age** of August 5, page 78.) The certificates, to be dated September 1, will mature in 15 annual installments of $238,000 each, beginning September 1, 1951. Division 4's report approved a selling price of 99.205 with interest at 2⅜ per cent—the bid of Halsey, Stuart & Co.—which will make the average annual cost of the proceeds approximately 2.51 per cent. The certificates were reoffered to the public at prices yielding from 1.5 to 2.625 per cent, according to maturity.

Security Price Averages

	August 29	Last week	Last year
Average price of 20 representative railway stocks	46.35	46.70	37.28
Average price of 20 representative railway bonds	95.84	95.93	86.22

Dividends Declared

Bangor & Aroostook.—5% preferred, $1.25, quarterly, payable October 1 to holders of record September 6.

Illinois Central.—75¢, payable October 2 to holders of record September 6.

Kansas City Southern.—common, $1, payable September 15 to holders of record August 31; 4% preferred, $1, quarterly, payable October 16 to holders of record September 30.

Pittsburgh, Fort Wayne & Chicago.—common, $1.75, quarterly; 7% preferred, $1.75, quarterly, payable October 2 and 3, respectively, to holders of record September 8.

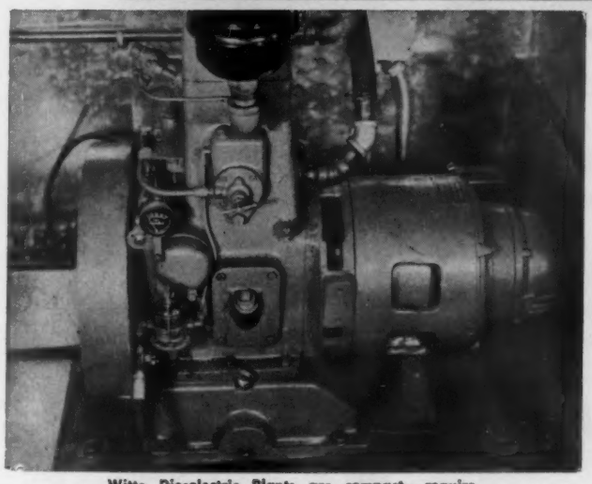
Reading.—4% 2nd preferred, 50¢, quarterly, payable October 12 to holders of record September 21.

RAILWAY OFFICERS

FINANCIAL, LEGAL & ACCOUNTING

Vernon A. Hewitt, secretary and treasurer of the CHICAGO, INDIANAPOLIS & LOUISVILLE, with headquarters at Chicago, has retired because of ill health. **Harold A. Smith,** vice-president and general counsel at Chicago, and **Howard C. Greer,** vice-president —finance at that point, have been appointed acting secretary and acting treasurer, respectively. Mr. Hewitt was born at Rensselaer, Ind., on September 2, 1895, and entered railroad service in April, 1914, as a stenographer for the Monon at Lafayette, Ind. In 1916 he was promoted to secretary to the general superintendent at Chicago, resigning in 1918 to take employment with a legal firm in Chicago. In Au-

Speed up Freight Movements with Diesel-Powered Radio Communications



Witte Dieselectric Plants are compact—require little valuable space in a caboose. They are available from 3 to 10 KVA-AC, 2.4 to 8 KW-DC.

Radio communications systems . . . with Witte Dieselectric Plants furnishing the power supply . . . have been developed to the point where through trains can handle single-car, way-station movements and still shorten between-terminal time.

For example, on a large Southwestern railroad, the installation of end-to-end radio has saved an average of two hours and 40 minutes on a single-track, 280-mile mainline run.

Because of continuous power, the handling of this class of movements, through radio, becomes really practical . . . with the proven reliability found only in Witte Dieselectric Plants.

Witte has had wide experience in making Dieselectric Plant installations for communications . . . as well as refrigeration, lighting, cooking and signalling . . . on many of the nation's leading railroads. Our railroad sales engineers will be glad to discuss with you installations on your line; there's no obligation.

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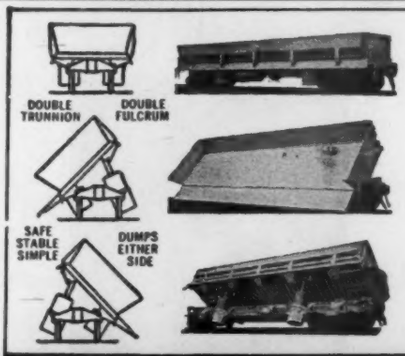

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gust of that year he returned to the Monon as secretary to the president, and in 1920 was appointed chief clerk to the president and the trustees. In 1939 Mr. Hewitt was promoted to executive chief clerk, and in 1940 was further advanced to office manager, executive department. In July, 1944, he was appointed assistant to the chief executive officer, and in January, 1946, was made treasurer. Mr. Hewitt was advanced in May, 1946, to treasurer and assistant secretary, and in May, 1947, was promoted to secretary and treasurer.

B. D. Martin, acting assistant comptroller of the Chesapeake district of the CHESAPEAKE & OHIO, has been appointed general auditor in charge of accounting for that district at Richmond, Va. Mr. Martin was born on March 1, 1898, at Huntington, W. Va. He entered railroad service in August, 1916, with the C.&O. as a secretary, and was appointed accountant in April, 1922; assistant supervisor of the material accounting bureau in October, 1930; assistant supervisor of the central timekeeping and material bureau in November, 1931; supervisor of the latter bureau in March, 1932; and assistant auditor of disbursements in February, 1942. Mr. Martin became director of personnel statistics in March, 1947, and in February, 1948, was appointed auditor of disbursements, which position he held until recent months, when he served as acting assistant comptroller of the Chesapeake district.

B. D. Martin

J. L. Homire, general attorney of the ST. LOUIS-SAN FRANCISCO, has been promoted to general solicitor, with headquarters remaining at St. Louis.

Reuben J. Hagman, general solicitor of the GREAT NORTHERN, with headquarters at St. Paul, Minn., has retired. He is succeeded by **Anthony Kane,** assistant general counsel at St. Paul. Mr. Hagman was born at Charles City, Iowa, on February 2, 1888, and attended law school at the University of Washington. He started with the G. N. in 1910 as a stenographer at Spokane, Wash., and in 1912 became a law clerk at Seattle. He served as assistant attorney at that point prior to entering the Army in World War I. In 1919 he became assistant attorney at Spokane, and the following year was transferred to St. Paul as attorney. He was advanced to assistant general solicitor in 1922, and appointed assistant general counsel in charge of commerce litigation in 1926.

Anthony Kane

Mr. Hagman has been serving as general solicitor since 1945.

Mr. Kane is a graduate of the University of Washington Law School. He became affiliated with the G. N.'s law department in 1937, following two years in private practice at Seattle. He served for four years during World War II in the Judge Advocate General's department of the Army, attaining the rank of lieutenant colonel. On his return to the G. N. in 1946, he was appointed assistant general counsel at St. Paul.

Max Lee Boydston, tax agent of the CHICAGO, MILWAUKEE, ST. PAUL & PACIFIC at Chicago, has been advanced to tax commissioner at that point, as reported by *Railway Age* on July 29. Mr. Boydston was born in Fresno, Cal., on January 22, 1911, and was graduated in 1935 from the University of Washington's School of Business Administration. He began his career with the Milwaukee in 1941, serving as stenographer-clerk in the Seattle, Wash., office of the tax department until January, 1944, when he became assistant tax agent at that office. The following June he was appointed tax agent there, being transferred to Chicago in that capacity in January, 1949.

OPERATING

As announced in the *Railway Age* of July 29, **Clifford F. Grimes** has been appointed superintendent of the Syracuse division of the NEW YORK CENTRAL at Syracuse, N. Y. Mr. Grimes was born in 1900 at Thurston, N. Y., and entered the service of the Central in 1917 as a signal operator at Syracuse. He became a fast freight clerk in the assistant general manager's office at Syracuse in 1926 and in 1938 was appointed trainmaster at Selkirk, N. Y., transferring to East Syracuse in 1944.

Clifford F. Grimes

Mr. Grimes became assistant to the general manager at Syracuse in 1947 and was named assistant superintendent at Albany, N. Y., in 1948, transferring to Syracuse later that year.

Edwin Ralph Shrader, whose promotion to superintendent of the CHICAGO, BURLINGTON & QUINCY, with headquarters at St. Joseph, Mo., was reported in the *Railway Age* of July 1, was born at Tamora, Neb., on May 23, 1902. Mr. Shrader began his career with the Burlington in July, 1925, when he became a laborer and deliveryman at Alliance, Neb. He later held various positions at Alliance, Lincoln, Neb., and Hastings. In 1936 he was made assistant trainmaster at Alliance, and the next year was advanced to trainmaster, which position he held successively at Casper, Wyo., Alliance and Denver, Colo. He became assistant superintendent at Sterling, Colo., in April, 1945, and two years later was transferred to Lincoln. Mr. Shrader was advanced to assistant to general manager at Omaha, Neb., in September, 1949, in which capacity he was

Edwin Ralph Shrader

serving at the time of his latest promotion.

The CHICAGO, MILWAUKEE, ST. PAUL & PACIFIC has announced the following changes in its operating department: **C. E. Crippen,** general superintendent at Milwaukee, Wis., promoted to general superintendent of all terminals with headquarters at Chicago; **J. H. Stewart,** superintendent at Savanna, Ill., advanced to succeed Mr. Crippen; **E. G. Kiesele,** superintendent of terminals at Chicago, transferred to Savanna, succeeding Mr. Stewart; **K. R. Schwartz,** superintendent of terminals at Milwaukee, transferred to Chicago, replacing Mr. Kiesele; **J. J. Dombrowski,** assistant superintendent of terminals at Milwaukee, promoted to succeed Mr. Schwartz; **M. T. Sevedge,** trainmaster at Aberdeen, S. D., appointed as Mr. Dombrowski's successor, and in turn succeeded by **R. W. Riedl,** trainmaster at Davenport, Iowa; **S. F. Philpot,** assistant superintendent at Wausau, Wis., transferred to Madison, Wis.; **S. E. Herzog,** trainmaster at Madison, advanced to succeed Mr. Philpot; **L. H. Walleen,** trainmaster at Horicon, Wis., appointed to the same position at Davenport, Iowa, succeeding Mr. Riedl, and **G. J. Barry,** transportation assistant at Chicago, made trainmaster at Milwaukee.

C. E. Crippen

Mr. Crippen was born at Austin, Minn., December 20, 1907, and graduated from the University of Minnesota in 1930. The same year he joined the Milwaukee, and served as instrumentman at several points until 1933, when he became special water inspector at Chicago. In 1936 he was appointed division engineer at Savanna, and in 1937, assistant engineer system, at Chicago. He became assistant trainmaster in 1940, and was advanced to trainmaster in 1941. From September, 1944 to February, 1946, Mr. Crippen served in the U. S. Army as a lieutenant colonel in the Transportation Corps. On his return to the Milwaukee in March, 1946, he was appointed assistant superintendent at Perry, Iowa, and in August of the same year was made chairman of the president's committee at Chicago. He was further promoted in July, 1947, to superintendent of the Minneapolis-St. Paul Terminals division at Minneapolis, Minn., becoming general superintendent at Milwaukee in November, 1948.

F. A. Brink has been appointed trainmaster of the ILLINOIS CENTRAL at Clinton, Ill.

K. E. Miller, assistant to general superintendent of transportation of the DELAWARE & HUDSON, has been appointed superintendent of the Saratoga-Champlain division, with headquarters as before at Albany, N. Y., succeeding **C. H. House,** who has been transferred to the Susquehanna division at Oneonta, N. Y., replacing **William Wallace.** Mr. Miller also succeeds Mr. House as superintendent of the GREENWICH & JOHNSONVILLE.

TRAFFIC

R. G. Stephens has been appointed district passenger agent of the SOUTHERN PACIFIC LINES at Atlanta, Ga.

J. O. Cross has been appointed division freight and passenger agent of the MISSOURI-KANSAS-TEXAS at Waco, Tex.

George N. Sabin has been appointed assistant general freight agent of the CHICAGO & EASTERN ILLINOIS, at Chicago. Mr. Sabin was associated with the United States General Accounting Office at Washington, D. C., for the past 11 years.

Edward D. Grimes has been appointed district traffic agent of the ILLINOIS CENTRAL at Bloomington, Ill., succeeding **Roy A. Vinall,** whose appointment as general agent at Minneapolis, Minn., was reported in the *Railway Age* of August 5.

MECHANICAL

E. L. Cook has been appointed mechanical engineer of the SEABOARD AIR LINE at Norfolk, Va. Mr. Cook was formerly office assistant to chief mechanical officer at Norfolk and not terminal trainmaster at Richmond, Va., as reported in the *Railway Age* of August 19.

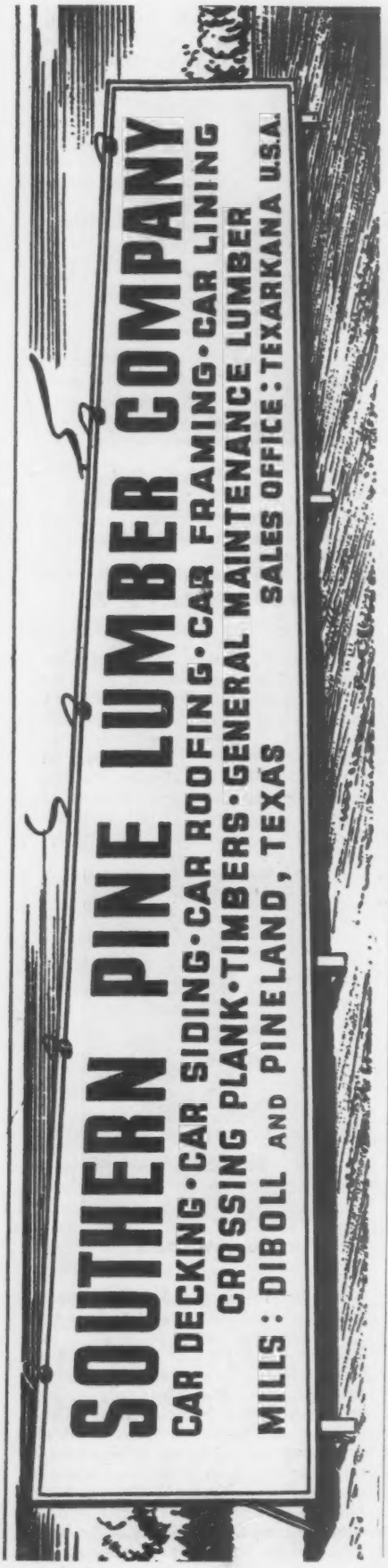
William Bruce Johnson, whose appointment as assistant superintendent of machinery of the KANSAS CITY SOUTHERN and the LOUISIANA & ARKANSAS, with headquarters at Pittsburg, Kan., was reported in the *Railway Age* of July 8, was born on April 5, 1907, at Weir, Kan. Following graduation from high school in 1925, Mr. Johnson entered railroad service in June of the same year as a carman apprentice with the K. C. S. at Kansas City, Mo. In 1934 he was appointed assistant mechanical foreman, and in 1936 was made mechanical foreman at Texarkana, Tex. From June, 1943, to November, 1945, Mr. Johnson served with the 707th Railway Grand Division, and on his return to civilian life rejoined the K. C. S. as assistant to superintendent of machinery, the position he held at the time of his recent appointment.

William Bruce Johnson

ENGINEERING & SIGNALING

Harry W. Dunn, whose appointment as signal and electric engineer of the CHICAGO & WESTERN INDIANA and the BELT OF CHICAGO, with headquarters at Chicago, was reported in the *Railway Age* of July 8, was born on January 30, 1909, at Lewiston, Pa. Mr. Dunn attended the public schools at Altoona, Pa., and entered railroad service in May, 1926, as a signal helper on the Chesapeake & Ohio at Gordonsville, Va. Subsequently he held various positions until furloughed in 1932, at which time he went with the Crosley Radio Corporation as a trouble shooter and inspector. Following service with the Midwest Radio Corporation at Cincinnati, Ohio, as chief draftsman and designer, he re-entered railroad service in 1936 as a signalman on the Baltimore & Ohio at Cincinnati. In 1937 he was promoted to signal foreman, which position he held (in addition to that of signalman on

Harry W. Dunn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the Chicago, Rock Island & Pacific during off-construction periods) on the B. & O. until 1940. Mr. Dunn later joined the Chicago Rapid Transit Company as a signal draftsman on the elevated lines, becoming assistant signal engineer in August, 1942, in which capacity he served as field engineer for installation of signals in the State Street subway. In July, 1945, he became associated with Deleuw, Cather & Co. in Chicago, serving as a consulting engineer, and handling the railroad signal engineering work involved in the track depression project at El Paso, Tex. In July, 1948, Mr. Dunn joined the Belt of Chicago as supervisor signal and electrical equipment, the post he held prior to his recent appointment.

W. R. Birt, whose promotion to superintendent of telegraph of the SOUTHERN PACIFIC, with headquarters at San Francisco, Cal., was reported in the *Railway Age* of July 22, is a native of that city. Mr. Birt started his career with the S. P. in 1900 as a telegraph operator at Sacramento, Cal., and subsequently served as train dis-

W. R. Birt

patcher on the road's Sacramento and Salt Lake divisions. In 1906 he was transferred to San Francisco as night wire chief in the general telegraph office. He later held the positions of day wire chief, system electrician and telegraph and telephone engineer. In 1924 Mr. Birt was advanced to assistant superintendent of telegraph, the post he held prior to his recent promotion.

G. W. Miller has been appointed engineer, maintenance of way, of the Eastern region of the CANADIAN PACIFIC at Toronto, Ont., as announced in the *Railway Age* of July 29. Mr. Miller was graduated from the University of British Columbia and joined the C.P. as a transitman at Vancouver, B. C., in 1927. He subsequently served as roadmaster on the Kootenay division and division engineer at Revelstoke, B. C. In 1939 Mr. Miller became assistant engineer in the office of the chief engineer at Montreal, Que., and four years later was appointed assistant engineer, maintenance of way, Eastern region, at Toronto. He was named district engineer of the Ontario district in 1946 and again two years later became assistant engineer, maintenance of way, of the Eastern region, which position he held until his recent appointment.

G. W. Miller

As reported in the *Railway Age* of July 29, **William Scott Hanley** has retired as chief engineer of the ST. LOUIS SOUTHWESTERN at Tyler, Tex. Mr. Hanley was born at Terre Haute, Ind., on September 9, 1877, and received his higher education at Rose Polytechnic Institute. He entered railroad service in 1902 as an assistant on the engineering corps of the Pennsyl-

William Scott Hanley

vania's Logansport division, and three years later became assistant division engineer at Danville, Ill., for the Chicago & Eastern Illinois. He later served as principal assistant engineer for the C. & E. I. at Chicago, and in 1912 went with the New Orleans Great Northern (now part of the Gulf, Mobile & Ohio) at Bogalusa, La., as chief engineer. Mr. Hanley became chief engineer of the Cotton Belt in May, 1921.

J. Floyd Beaver, whose appointment as chief engineer, maintenance of way and structures, of the Eastern lines of the SOUTHERN system at Charlotte,

N. C., was reported in *Railway Age* of July 8, was born at Spencer, N. C., on October 2, 1903, and was graduated from North Carolina State College. He joined the Southern on June 17, 1926, as a student apprentice and subse-

J. Floyd Beaver

quently served as assistant track supervisor and track supervisor until November, 1942, when he was appointed roadmaster at Greenville, S. C. On April 16, 1944, Mr. Beaver became trainmaster at Greensboro, N. C., and two years later was promoted to superintendent at Richmond, Va., transferring to Alexandria, Va., in November, 1947, where he remained until his recent promotion.

As reported in the *Railway Age* of July 29, **W. H. Hudson, Jr.,** has been appointed chief engineer of the ST. LOUIS SOUTHWESTERN at Tyler, Tex. Mr. Hudson was born on December 31, 1903, at Pine Bluff, Ark., and attended Washington University at St. Louis, Mo., receiving his B. S. degree in civil engineering there in 1926. He

W. H. Hudson, Jr.

joined the Cotton Belt in July, 1926, in his home town as a rodman, and from 1927 to 1945 served in various positions, including estimator, assistant engineer, levelman, transitman, rodman, chainman and track apprentice. In March, 1945, Mr. Hudson was ap-

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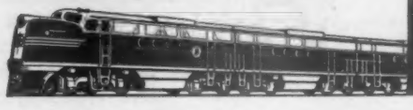
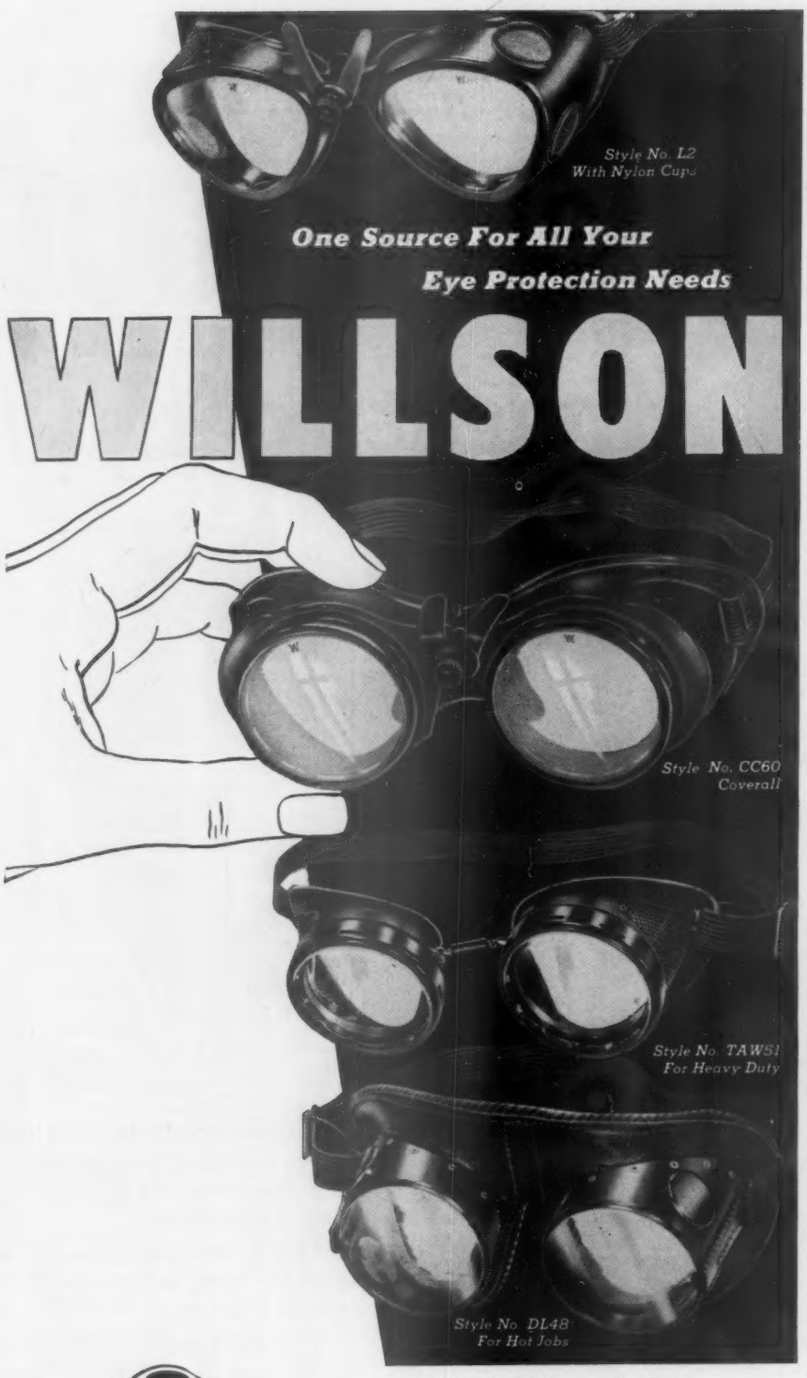


Santa Fe



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pointed assistant division engineer at Pine Bluff, and in January, 1949, was advanced to assistant chief engineer at Tyler, Tex., from which post he has been promoted.

B. G. Packard, division engineer, Dakota division, of the CHICAGO & NORTH WESTERN, at Huron, S. D., has been transferred to the Galena division, with headquarters at Chicago. Succeeding Mr. Packard is **R. D. Culbertson,** division engineer, Peninsula division, at Escanaba, Mich. **L. J. Deno,** office engineer at Chicago, has been appointed to succeed Mr. Culbertson.

C. E. Hise, division engineer of the CHICAGO & NORTH WESTERN, at Chicago, has been appointed office engineer in the chief engineer's office at that point.

Hilmar B. Christianson, whose promotion to assistant chief engineer of the CHICAGO, MILWAUKEE, ST. PAUL & PACIFIC, with headquarters at Chicago, was reported in the *Railway Age* of July 29, was born on September 24, 1892, in Minneapolis, Minn. Graduating from the University of Minnesota in 1915 in civil engineering, Mr. Christianson began his railroad career that year in the land department of the Northern Pacific. In 1916 he joined the Milwaukee's valuation department. He has served continuously with that road since March, 1917, except for army service in both World Wars. From March, 1917, to 1920 he held the positions successively of field draftsman, instrumentman and assistant engineer in the valuation department, and subsequently served as instrumentman in the engineering department at Chicago and Beloit, Wis., and as assistant engineer at Savanna, Ill., and Marion, Iowa. He became division engineer at Sioux City, Iowa, in 1925, holding the same position at Marion, Miles City, Mont., LaCrosse, Wis., and Savanna until October, 1942. Mr. Christianson then served in the U. S. Army Corps of Engineers, spending 33 months in the Southwestern Pacific theatre. Following his discharge, with the rank of colonel, he was appointed assistant to chief engineer of the Mil-

Hilmar B. Christianson

waukee, and in June, 1947, became principal assistant engineer, system, the post he held before his latest promotion.

Charles Thomas Jackson, whose retirement as chief engineer of the CHICAGO, MILWAUKEE, ST. PAUL & PACIFIC, with headquarters at Chicago, was reported in the *Railway Age* of July 29, was born at Miami, Mo., on July 13, 1881. He received his higher education at the University of Missouri, from which he was graduated in civil engineering in 1903. Upon graduation he entered the service of the Milwaukee, his experience covering location, construction and maintenance work. He has served as locating engineer, resident engineer, district engineer, assistant engineer maintenance of way, assistant to chief engineer, assistant chief engineer, and, since last January, as chief engineer.

PURCHASES & STORES

As reported in the *Railway Age* of August 5, **George H. Bolton** has been appointed purchasing agent of the BOSTON & MAINE at Boston, Mass. Mr. Bolton entered the service of the B.&M. as a clerk in the publicity and advertising department in 1917 and transferred to the purchasing and stores department the following year. In June, 1930, he was promoted to assistant chief clerk and in 1940 was named assistant to the purchasing agent. Mr. Bolton became tie and timber agent in February, 1948, which position he held until his recent appointment.

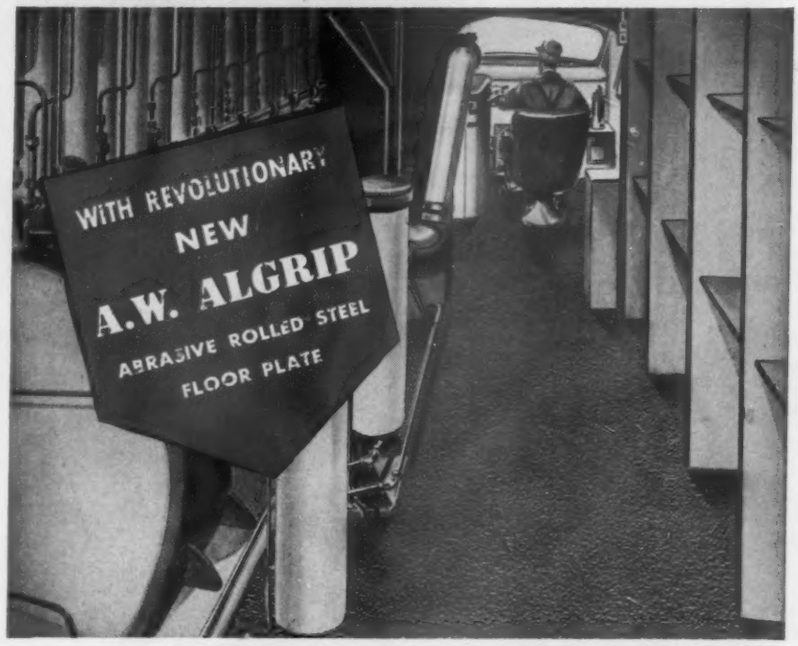
George H. Bolton

OBITUARY

Ashbel B. Newell, 82, president and general manager of the TOLEDO TERMINAL at Toledo, Ohio, died on August 27 at his home in that city.

Lewis R. Gwyn, 75, who retired on August 1, 1938, as vice-president in charge of labor relations of the RAILWAY EXPRESS AGENCY at New York, died on August 29 in White Plains, N. Y., Hospital.

NOW RAILROADS CAN END COSTLY SLIPPING ACCIDENTS PERMANENTLY



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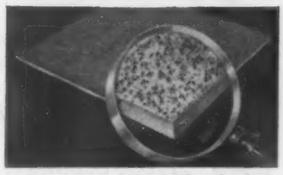

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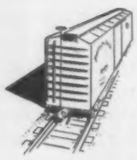

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CHART

Color Code for Alloy, Stainless, Carbon and Structural Steels. 9¼ in. by 8¾ in., printed in seven colors. Available without charge to Railway Age *readers from the United States Steel Supply Company, 208 So. LaSalle St., Chicago 4.*

This color chart is designed to permit customer identification of various steel and steel alloys purchased from the company. It is suitably gloss-surfaced for heavy duty service in shops and other places where subject to dirt and smudging.

BOOKS

Investment in Transportation, by Harlan A. Harrison. 133 pages, tables, mimeo. Available from Julian S. Duncan, chairman, Department of Economics, University of New Mexico, Albuquerque, N. M. 70 cents.

Prepared as a master's thesis, this is a study of investment and financial problems of railroads and highways; a discussion of proposed solutions to these problems, particularly with reference to possible inequities existing between the two transportation media; and an analysis of potential new sources of railroad venture capital.

British Steam Horses, by George Dow. 122 pages, illustrations. Published by Phoenix House, Ltd., 38 William IV st., Charing Cross, London, England. Available in this country from the Macmillan Company, 60 Fifth ave., New York 11. $2.50.

Britain is still the land of the steam locomotive triumphant. Enthusiasm over the iron horse has long been more intense in that country than perhaps anywhere else on earth. The neat, efficient, shiny, brightly-painted British locomotive of the golden days before World War II apparently attracted considerable affection in these United States as well.

People who are interested in British steam locomotives of modern days will do well to read this latest example of locomotive literature for the layman written by the public relations and publicity officer of the London Midland Region of British Railways. Included in its chapters are an excellent elementary description of a steam locomotive and what makes it go; reminiscences of some famous designers like Robinson and Churchward; the production of locomotives in railroad-owned shops; an account of outstanding passenger and freight classes of power; an interesting account of what goes on in a running depot (roundhouse), of which there are some 400 in Britain; and a description of speed and tonnage records.

The book is well illustrated with spectacular photographs which the British are so adept at producing.

PAMPHLETS

Bibliography of Railway Literature. 48 pages. Compiled by the Association of American Railroads, Transportation bldg., Washington 6, D. C. Free.

Lists 283 books, booklets and periodicals suitable for boys and girls ranging up to advanced high school age and for the average adult. It covers juvenile books, general

literature, model railroading, railway statistics, railway and travel periodicals and railway employee periodicals. Addresses of the publishers whose material is included are also given.

Management of Industrial Research; A Selected and Annotated Bibliography. 14 pages. Published by Arthur D. Little, Inc., Cambridge 42, Mass. Free.

This bibliography was prepared primarily for use by members of the Arthur D. Little staff as a supplement to their personal experience in management of research programs and projects. It has been prepared principally from the viewpoint of the research director and of those in charge of research policy. It is made publicly available at this time because of the interest shown by many organizations in a fundamental review of their research policies, objectives, procedures and programs. The references have been arranged in sections relating to: (1) the research organization and how it can be best administered; (2) procedures for control of research expenditures to assist in evaluation of results; (3) design of the research program for optimum results, both current and long range, and technical as well as economic; and (4) the research laboratory with its problems of arrangement and construction.

The Twenty-Seventh Annual Green Book Report on the 23rd Railroad Employees' National Safety Award, Class I Railroads, Year 1949. Published by the National Safety Council, 425 No. Michigan ave., Chicago 11.

The annual tabulation of the safety performance of America's railroads indicates that further progress toward the goal of accident elimination has been made. Of particular interest is the publication of the goal for the year 1950, previously stated as a reduction by 15 per cent of the 1949 casualty total. Release of final employee-accident figures from the Interstate Commerce Commission has enabled the council to give the 1950 objective in specific terms—a reduction in employee fatalities from .13 to .11 per million man-hours and a reduction in employee injuries from 7.26 to 6.17 per million man-hours. In addition to detailed statistical accounts of the safety record of the various classes of railroads striving for the award, the book takes note that 1950 marks the 35th anniversary of the railroad section of the council by stating that the section is not only one of the oldest in the council, but also that it has always been one of the most active.

The Highway Transportation Story . . . In Facts. 32 pages. Published by the National Highway Users Conference, Inc., 952 National Press bldg., Washington 1, D. C. Free.

This booklet discusses in brief paragraphs, buttressed by current statistics, what highway transportation means to the farmer, the worker, the consumer, the traveler, the family, and 17 other socio-economic groups. It also has collected statements about the vehicles and the highway systems of America, and gives figures on tax payments by highway users of all kinds, including the private motorist and the truck operator.

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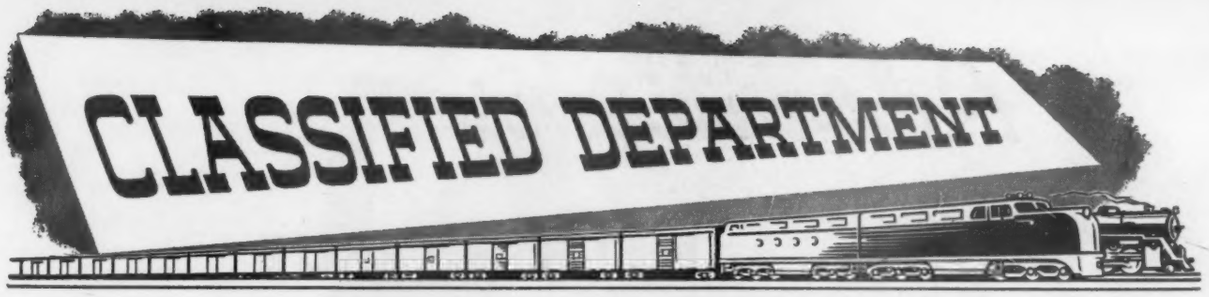

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Advertisers

IN THIS ISSUE

Alan Wood Steel Company 105
Allied Chemical & Dye Corporation, The Barrett Division 36
Aluminum Company of America 31
American Car and Foundry Company 68, 69, 92, 93
American Hair & Felt Co. 94
American Locomotive Company 80, 81
American Steel Foundries 41
American Steel & Wire Company 8, 9
Armco Steel Corporation 10
Atchison, Topeka & Santa Fe Railway System 103
Automatic Electric Sales Corporation 32, 33

Baltimore & Ohio Railroad 25
Barrett Division, The Allied Chemical & Dye Corporation 36
Bethlehem Steel Company 39
Boyer, R. H. 109

Carnegie-Illinois Steel Corporation 8, 9
Chicago, Indianapolis and Louisville Railway Company 34
Classified Department 109
Colorado Fuel and Iron Corporation, The .. 38
Columbia Steel Company 8, 9
Combustion Engineering-Superheater, Inc... 87
Cooper-Bessemer Corporation, The 28, 29

Dearborn Chemical Company 21
Delaware, Lackawanna & Western Railroad 67
Differential Steel Car Co. 99

Electric Storage Battery Company, The.... 35
Electro-Motive Division, General Motors Corporation .....Back Cover
Esso Standard Oil Company 89

Fairbanks, Morse & Co. 11
Franklin Railway Supply Company 91

General Electric Company 80, 81
Graybar Electric Company, Inc. 107
Great Lakes Steel Corporation 70

Heywood-Wakefield 16, 17
Hulson Co. 111
Hyman-Michaels Company 99

Illinois Central Railroad 27
International Correspondence School 109
Iron & Steel Produlcts, Inc. 109

Johns-Manville 26

Kansas City Southern Lines 30

Lima-Hamilton Corporation 24

Miner Inc., W. H. 3
Minneapolis & St. Louis Railway, The 18
Missouri-Kansas-Texas 42
Missouri Pacific Lines 46
Monon Lines 34

National Steel Corporation 70
National Tube Company 8, 9
New York Central System 20

Ohio Locomotive Crane Co., The 108
Ohio Steel Foundry Co., The 108
Okonite Co., The 99
Orton Crane and Shovel Co. 2

Pressed Steel Car Company, Inc. 85
Pullman-Standard Car Manufacturing Company 12, 13
Purdy Company, The 108

Railway Educational Bureau, The 109
Rust-Oleum Corporation 106
Ryerson & Son, Inc., Joseph T. 110

St. Louis Car Company 79
Sante Fe System Lines 103
Scullin Steel Co. 97
Signode Steel Strapping Company 40
Simmons-Boardman Publishing Corp. 108
Southern Pine Lumber Company 102
Superheater, Inc.-Combustion Engineering.. 87

Tennessee Coal, Iron & Railroad Company. 8, 9
Thrall Car Manufacturing Co. 108

Union Pacific Railroad 23
Union Switch & Signal Co. 6
United States Steel Export Company .. 8, 9, 99
United States Steel Supply Company ... 8, 9, 99

Vanadium Corportion of America 22

Waugh Equipment Company 19
Westingtouse Air Brake Co. 4
Westinghouse Electric Corporation 14, 15
Whiting Corporation 82
Willson Products, Inc. 104
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Yale & Towne Manufacturing Company, The 37
Youngstown Steel Door Company ..Front Cover

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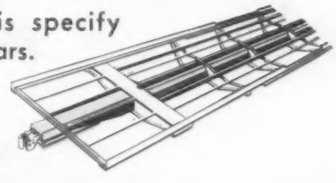

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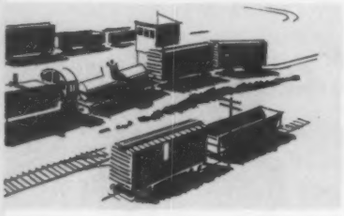

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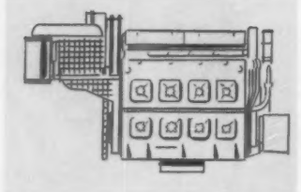

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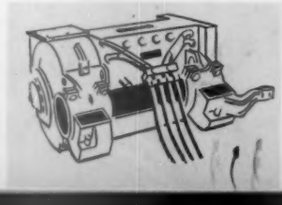

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